Compaq Armada M700
Series of Personal Computers

Reference Guide

COMPAQ

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REFERENCE GUIDE

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preface

USING THIS GUIDE

Some or all of the following format conventions are used in this guide to distinguish elements of text:

- Names of keys are shown in bold type as they appear on the keyboard, for example, **Ctrl**, **Backspace**, **Tab**.

- Keys that you should press at the same time are represented by the key names and the plus (+) symbol, for example, **Ctrl+Alt+Delete**.

- Commands are presented in lowercase, bold type as shown here: **install** or **a:\install**.

- An arrow symbol is used to separate names of icons or menus that you should select in succession, for example, select Start → Settings → Control Panel.

⚠ **WARNING:** Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

⚠ **CAUTION:** Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

IMPORTANT: Text set off in this manner presents clarifying information or specific instructions.

NOTE: Text set off in this manner presents commentary, sidelights, or interesting points of information.

chapter *1*

GETTING STARTED

Before you use your computer for the first time, you will have to complete some preliminary setup procedures. This chapter explains how to charge your battery pack for the first time and how to set up your computer and software.

Charging the Battery Pack for the First Time

The battery pack begins to charge as soon as the computer is connected to external power. Fully charge the battery pack before using it for the first time.

A new battery pack must completely charge before the computer is disconnected from external power. The battery pack is fully charged when the battery charge light turns off. A battery charges faster if the computer is not being used.

IMPORTANT: The battery charge level lights on a new battery pack accurately display the percent of a full charge remaining in the battery pack only once the battery has been fully charged.

Connecting the Computer to External Power

❶ Plug the power cord into the AC Adapter.

❷ Plug the AC Adapter cable into the power connector on the back of the computer.

❸ Plug the other end of the power cord into an electrical outlet.

⚠ **WARNING:** To reduce the risk of personal injury, electric shock, fire, or damage to the equipment

- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
- Plug the equipment into a grounded (earthed) electrical outlet that is easily accessible at all times.
- Disconnect power from the equipment by unplugging the power cord from the electrical outlet.
- Do not place anything on power cords or cables. Arrange them so that no one can accidentally step on or trip over them. Do not pull on a cord or cable. When unplugging from the electrical outlet, grasp the cord by the plug.

NOTE: In Japan, you must first plug the power cord into the 3-to-2-prong plug adapter included with the computer. Ensure that the ground wire is connected to a safe earth ground, then plug the 3-to-2-prong plug adapter into the electrical outlet.

Opening the Computer

To open the computer,

1. Slide the display latch located on the front of the display ❶.
2. Lift the display to the desired angle ❷.
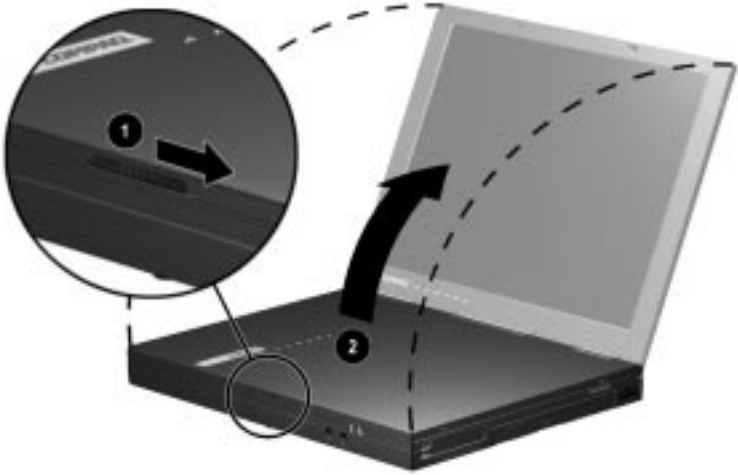
Turning the Computer On

To turn the computer on, slide the power switch and release it.

If the computer is only connected to external AC power, the computer will start up automatically when you plug it in.

Setting Up the Software

When you begin software setup, online instructions guide you through the setup process.

IMPORTANT: After you begin software setup, you must complete the entire process. Make sure the computer is plugged into an external power source to ensure that software setup is not interrupted.

> ⚠ **CAUTION:** To prevent file corruption and ensure the correct software drivers are installed
>
> ■ Do not dock the computer in a docking station.
> ■ Do not turn off or unplug the computer or remove a drive during software setup.

Operating the Computer During Setup

- To move around the screen while making selections and entering information

    - press the **Tab** key,

    - press the cursor (arrow) keys, or

    - use the navigation device built into the computer keyboard.

- To save your selections, press the **Enter** key or press the left navigation device button on the computer keyboard.

- To restore the screen if it is cleared by the screen saver during a period of keyboard and navigation device inactivity, press the **Shift** key.

For more information about using the built-in navigation devices, refer to Chapter 3, "Navigation Devices and Keyboard."

Choosing a Language

If you are prompted to select your language, choose carefully.

IMPORTANT: The languages that you do **not** choose will be deleted from the computer and cannot be recovered.

Completing Setup

Registering the Computer (North America Only)

Be sure to register the computer according to the instructions on the *Register Now* card included with the computer.

Locating the Preinstalled Quick Reference Guide

To access the quick reference guide,

- Select the *Armada Quick Reference* icon on the desktop

    or

- Select Start→Compaq Information Center→Armada Quick Reference

Accessing the Internet

Internet Explorer 4 has been preinstalled on your computer. To access the Internet from your desktop, double-click on the Internet Explorer icon. Internet Explorer will walk you through the steps to set up your personal Internet connection. You must be connected to a modem or a network to access the Internet.

Preinstalled Operating System and Software

Either Microsoft Windows 95, Microsoft Windows 98, or Microsoft Windows NT 4.0 Workstation is preinstalled on the computer.

Compaq has enhanced the preinstalled operating system on the computer to provide you with additional software features and increased computer functionality.

Before deleting the operating system preinstalled on the computer, please read the following caution:

> **CAUTION:**
> - Replacing the preinstalled Windows 95, Windows 98, or Windows NT 4.0 operating system with a retail version will result in the loss of all Compaq enhancements.
> - Most preinstalled reference files, such as Help files, are available only through the Windows 95, Windows 98, or Windows NT 4.0 interface. If the operating system is removed from the computer, these reference files will become unavailable.
> - Complete USB support is available only through Windows 98. Installing an operating system other than Windows 95 or Windows 98 may result in a loss of USB functionality.

In addition to the operating system, Compaq installs other software to provide additional functionality or enhancements. If it is necessary to reinstall the operating system and you do not want to lose these enhancements, it will also be necessary to reinstall all Compaq software for your computer. These enhancements are available at the Compaq Web site (www.compaq.com) and from the *Compaq QuickRestore CD-ROM Kit* included with your computer.

chapter 2

COMPUTER AT A GLANCE

This chapter introduces you to the physical components of your computer. The components are identified individually along with brief descriptions.

Front Components

Front Components

Component	Description
❶ hard drive bay	Holds the hard drive in the computer.
❷ stereo speaker/headphone jack	Connects external speakers or headphones to the computer.
❸ microphone jack	Connects an external microphone to the computer.
❹ system-on light	Indicates that the computer is turned on.
❺ battery charge light	Indicates that the computer is charging a battery pack.

Rear Components

Rear Components	
Component	Description
❶ infrared port	Allows wireless communication between the computer and another infrared-equipped device, such as a computer or printer.
❷ serial connector	Connects an optional external serial device, such as a mouse.
❸ external monitor connector	Connects an optional external display, such as an external monitor.
❹ docking connector	176-pin expansion bus connector that connects the computer to the desktop expansion base or convenience base.
❺ parallel connector	Connects an optional parallel device, such as a printer.
❻ power connector	Connects the AC Adapter to the computer.
❼ USB port	Allows you to attach the computer to a Universal Serial Bus (USB) device, such as a camera for video. Or, you can attach a hub, which would allow you to connect multiple USB devices to the computer.
❽ keyboard/mouse connector	Connects an optional full-sized keyboard or a PS/2 compatible mouse. A generic splitter/adapter will allow the connection of both an external keyboard and external mouse at the same time.

Left Side Components

Left Side Components

Component	Description
❶ composite TV-out connector	Connects a television, VCR, camcorder, or overhead projector.
❷ airflow vent	Allows airflow needed to cool computer components. Do not block airflow vents.
❸ cable lock connector	Attaches an optional security cable to the computer.

Right Side Components

Right Side Components

Component	Description
❶ PC Card slots	Hold PC Cards: ■ 2 Type-1 ■ 2 Type-2 ■ 1 Type-1 and 1 Type-2, or ■ 1 Type 3
❷ airflow vent	Allows airflow needed to cool computer components. Do not block airflow vents.
❸ MultiBay	Supports MultiBay devices.
❹ sound vent	Enhances stereo sound.
❺ RJ-11 jack	Connects a standard telephone cable or modem cable to the computer.
❻ RJ-45 jack	Connects a network cable to the computer.

Top Components

Top Components

NOTE: Navigation device components are described in Chapter 3.

Component	Function
❶ lid switch	Turns off the computer display if the computer is closed while still turned on.
❷ suspend button*	Initiates and exits Suspend.** When pressed with the **Fn** key, initiates Hibernation.
❸ hard drive light	Indicates hard drive activity.
❹ MultiBay drive light	Indicates MultiBay or external diskette drive activity.
❺ Num Lock light	Indicates that Num lock is on and the embedded numeric keypad is enabled.
❻ Caps Lock light	Indicates that Caps lock is on.
❼ Scroll Lock light	Indicates that Scroll lock is on.
❽ power switch	Turns the computer on or off or exits Suspend.
❾ internal speakers	Produce stereo sound.

*In Windows 98 the term *sleep button* replaces the term *suspend button.*

**In Windows 98 the term *Standby* replaces the term *Suspend.*

Bottom Components
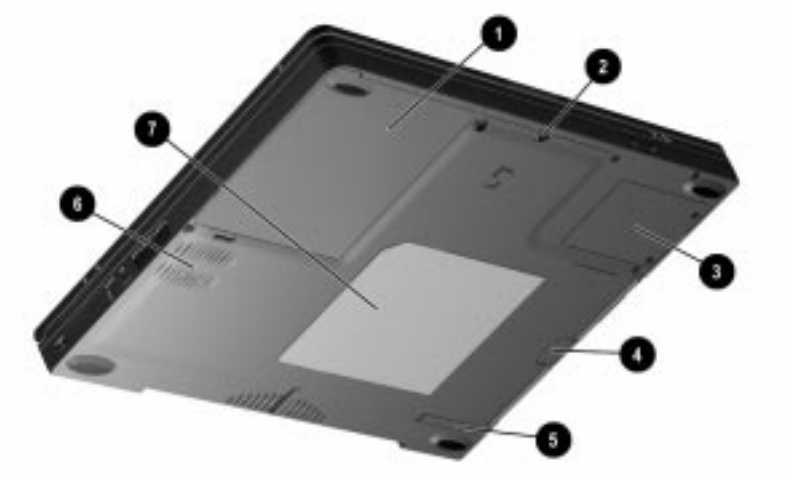
Bottom Components

Component	Description
❶ battery bay	Holds the primary battery.
❷ hard drive security screw	Secures the hard drive in the hard drive bay.
❸ modem slot cover	Contains the modem board.
❹ MultiBay notch	Helps remove a drive or battery pack from the MultiBay.
❺ MultiBay release latch	Releases a removable drive or battery pack from the MultiBay.
❻ fan	Provides airflow to cool internal components.
❼ label	Identifies computer and provides the serial number needed when calling Compaq customer support.

chapter 3

NAVIGATION DEVICES AND KEYBOARD

Your computer has either a pointing stick or touchpad feature that performs the same functions as a mouse. This chapter explains how to navigate through applications using the pointing stick, touchpad, and keyboard.

Pointing Stick Model

The EasyPoint IV pointing stick and buttons perform the same basic operations as a mouse. The pointing stick senses finger movement although the device itself does not move.

To operate the pointing stick model

1. Place your index finger on top of the pointing stick ❶.

2. Push in the direction you want the cursor to move on the display.

3. Click the left ❷ or right ❹ pointing device buttons with your thumb.

4. Hold the scroll button ❸ down and push up or down on the pointing stick to scroll through a document.

Optional Touchpad Model

The touchpad and buttons perform the same basic operations as a mouse.

To operate the touchpad model

1. Place your index finger on top of the touchpad ❶.

2. Slide your finger in the direction you want the cursor to move on the display.

3. Click the left ❷ or right ❸ touchpad buttons with your thumb.

Hotkeys

NOTE: Hotkeys work only on the computer keyboard and not on an external keyboard.

Hotkey Quick Reference

Function	Hotkeys	Return to Original State
Switching Displays	**Fn+F4**	**Fn+F4**
Adjusting System Volume	**Fn+F5**	**Fn+F5**
Initiating QuickLock/ QuickBlank	**Fn+F6**	Enter power-on password
Accessing Power Management	**Fn+F7**	**Fn+F7**
Accessing the Battery Gauge	**Fn+F8**	**Fn+F8**
Accessing the Brightness Control	**Fn+F10**	**Fn+F10**
Accessing the Embedded Numeric Keypad	**Fn+NumLk**	**Fn+NumLk**
Stretching Text	**Fn+T**	**Fn+T**

Switching Displays

When an external monitor is connected to the computer, press the **Fn**+**F4** hotkeys as a toggle function to

- Switch to computer display (default).
- Switch to external monitor or television.
- Turn on both displays simultaneously.

Adjusting System Volume

Press the **Fn+F5** hotkeys to adjust the overall system volume.

Double-click on the speaker icon on the Windows taskbar to adjust the volume of individual system components.

Initiating QuickLock/QuickBlank

IMPORTANT: Before QuickLock/QuickBlank can be initiated, a power-on password must be established and QuickLock/QuickBlank must be enabled through Computer Setup.

Press the **Fn+F6** hotkeys to initiate QuickLock/QuickBlank at any time and from within any application. These hotkeys

■ Disable the keyboard and the pointing device.

■ Clear the display.

To reenable the keyboard and return your information to the screen, enter your power-on password.

Accessing Power Management

Press the **Fn+F7** hotkeys to access Power Management. These hotkeys let you customize the level of battery conservation, or use one of the three preset conservation levels.

Use the left or right arrow keys to select a different level.

Accessing the Battery Gauge

Press the **Fn+F8** hotkeys to show the status of the battery packs. Three numbered boxes indicate the status of each installed battery.

Press the right or down arrow key to view the status of the next battery pack. If a battery pack is not in a bay, the corresponding bay cannot be selected. Press the left or up arrow key to select the previous battery pack.

Accessing the Brightness Control

Press the **Fn+F10** hotkeys to adjust the screen brightness with an onscreen slide button or with the arrow keys.

Accessing the Embedded Numeric Keypad

The embedded numeric keypad is a section of the computer keyboard that converts to a numeric keypad when the number lock function is enabled.

❶ **Fn** key

❷ **Num Lk** key

❸ embedded numeric keypad

Press **Fn+Num Lk** to

- Enable the embedded numeric keypad (Num Lk light on).
- Disable the embedded numeric keypad (Num Lk light off).

With the number lock function enabled,

- Press **Fn** to type lowercase letters.
- Press **Fn+Shift** to type uppercase letters.

Stretching Text

When running MS-DOS under Windows, the image on the computer display may not fill the screen.

To stretch text so that it fills more of the screen, use the **Fn+T** keys. Toggle these keys to switch between stretched text mode and regular mode. The default is for the Text Stretch feature to be enabled.

The **Fn+T** function is available whenever the desktop area resolution is set lower than the resolution of the internal display device (LCD).

chapter 4

BATTERY PACKS

Your computer can be powered by battery packs or by an external power source. A battery pack gives you the freedom to carry your computer from place to place while you work, without plugging the computer into an external outlet each time.

This chapter identifies the battery components and provides helpful information about using battery packs.

Battery Components

Both the primary and MultiBay battery packs let you check their remaining charge levels before you insert them into their bays.

Primary Battery

To see how much power is left in the primary battery pack, press the battery gauge button ❶. Five battery charge level lights ❷ indicate the remaining charge level.

Each battery charge light represents approximately 20 percent of remaining charge.

MultiBay Battery Pack

To see how much power is left in the MultiBay battery pack, press the battery gauge button ❶. Five battery charge level lights ❷ indicate the remaining charge level.
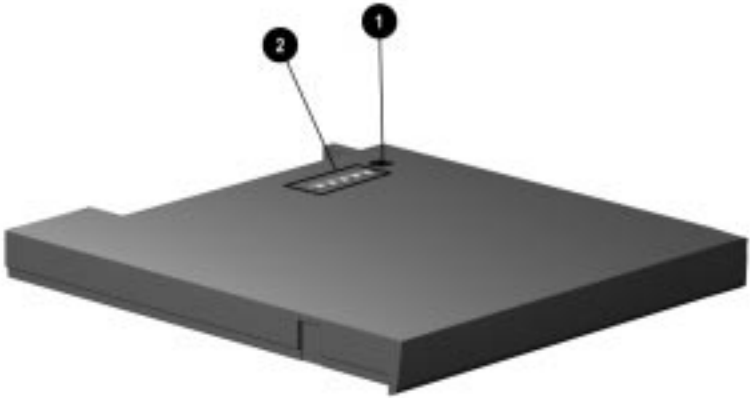
Each battery charge light represents approximately 20 percent of remaining charge.

Charging Battery Packs

⚠️ **WARNING:** To reduce the risk of injury or damage to the battery pack, do not crush, puncture, or incinerate the battery pack or short the metal contacts. Do not attempt to open or service the battery pack.

To charge the battery pack while it is in the computer, connect the computer to an external power source (external power, desktop expansion base, or convenience base).

The battery charge light turns on when the battery pack is charging.

Charging may not occur immediately if the battery pack temperature is outside the normal operating range of 50°F to 104°F (10°C to 40°C).

When the battery reaches the normal temperature level, it begins to charge until charging is complete.

A fully discharged battery pack charges in several hours. Charge time depends on the amount of power being used by the computer.

Ensuring Battery Gauge Accuracy

The battery gauge built into your computer displays the amount of charge remaining and is precalibrated for accuracy (To access the battery gauge, press the **Fn**+**F8** hotkeys). To ensure continued battery gauge accuracy and to maximize battery operating time

- Fully charge a battery pack prior to the first time that you use it with the computer.
- Allow the battery pack to completely charge before removing external power from the computer, optional desktop expansion base, convenience base, or battery charger.

Calibrating a Battery Pack

If your battery charge display seems inaccurate, you may need to recalibrate your battery pack. This may take several hours, so a good time to do this is overnight. The calibration utility supports both the primary and MultiBay battery packs. Check the calibration status of your batteries by accessing the Battery Calibration tab:

- **In Windows 95** select Start→Settings→Control Panel→Power→Battery Calibration tab.
- **In Windows NT 4.0** select Start→Settings→Control Panel→Compaq Power→Battery Calibration tab.
- **In Windows 98** select Start→Settings→Control Panel→Power Management→Battery Calibration tab.

View the battery calibration reports in the Status column. A battery pack can only be calibrated if the Status column beside a battery pack reports "Needs Calibration."

The Battery Calibration utility calibrates one battery pack at a time by fully discharging it, then fully recharging it. It can run in the background as you use the computer.

Initiating Calibration

1. Connect the computer to an external power source.

⚠ **CAUTION:** To prevent loss of data, ensure that the computer remains connected to external power throughout calibration.

2. Turn the computer on.
3. Insert the battery pack into the computer battery bay or MultiBay.
4. Access the Battery Calibration tab.
5. Select the battery pack needing calibration.
6. Select Start Calibration.

   NOTE: During calibration, a battery calibration icon displays in the taskbar. A Down arrow displays while the battery pack is discharging and an Up arrow displays while the battery pack is recharging.

Stopping Calibration

Calibration will not resume if it is stopped before calibration is completed or if the computer is shut down during calibration. An interrupted calibration must be restarted.

To stop calibration, shut down the computer.

Or,

1. Access the Battery Calibration tab.
2. Select the battery pack being calibrated.
3. Select Stop Calibration. This selection is only visible during calibration.

Identifying a Low Battery Condition

When a low battery condition occurs, the computer beeps every 15 seconds and the battery power light blinks.

⚠ **CAUTION:** When you are alerted to a low battery condition, very little battery charge remains. Take immediate action to resolve the low battery condition.

When a low battery condition is reached, save your files and initiate Hibernation before replacing the battery pack.

When a critical low battery condition occurs, the system initiates Hibernation. It is recommended that Hibernation be enabled at all times to safeguard against possible data loss in a critical low battery condition.

⚠ **CAUTION:** If Hibernation is disabled, the computer does not initiate Hibernation when a critical low battery condition is reached. When this occurs, all unsaved data is lost.

Resolving a Low Battery Condition

Resolve a low battery condition when another power source is available by using one of these methods:

- Connecting to external power (refer to Chapter 1)
- Charging with an optional external Battery Charger
- Connecting to the optional Automobile Power Adapter/Charger
- Connecting to the optional Aircraft Power Adapter (Does not charge battery packs.)
- Docking the computer in an optional docking base that is connected to external power
- Replacing the battery pack

Resolve a low battery condition without a power source by

- Initiating Hibernation until a power source is available, or

- Saving your information and shutting down the computer until a power source is available.

Replacing a Battery Pack

You can resolve a low battery condition by replacing a discharged battery pack with a charged one. Always save your work before changing a battery pack.

> ⚠ **CAUTION:** If you are removing a battery pack that is the only power source available to the system while the computer is on, initiate Hibernation before removing the battery pack. Failure to do so will result in lost information.
>
> If the computer is on and connected to more than one power source, you can remove a battery pack without initiating Hibernation.

Removing a Primary Battery Pack from the Battery Bay

1. If a battery pack is your only power source, initiate Hibernation.

   NOTE: If there is drive activity, Hibernation may not occur instantly.

2. Close the display.

3. Tilt the computer up ❶ and push the battery release latch below the battery bay toward the fan ❷ to release the battery pack.

4. Remove the battery pack from the battery bay ❸.

Inserting a Primary Battery Pack into the Battery Bay

1. Close the display.

2. Tilt the computer up ❶.

3. With the smooth side of the battery pack facing up and the battery cells facing in, lead the rounded edge of the battery pack into the battery bay. Angle the battery pack into the bay until it is fully seated ❷.

4. If the computer is in Hibernation, slide the power switch to resume normal operation.

Removing a MultiBay Battery Pack
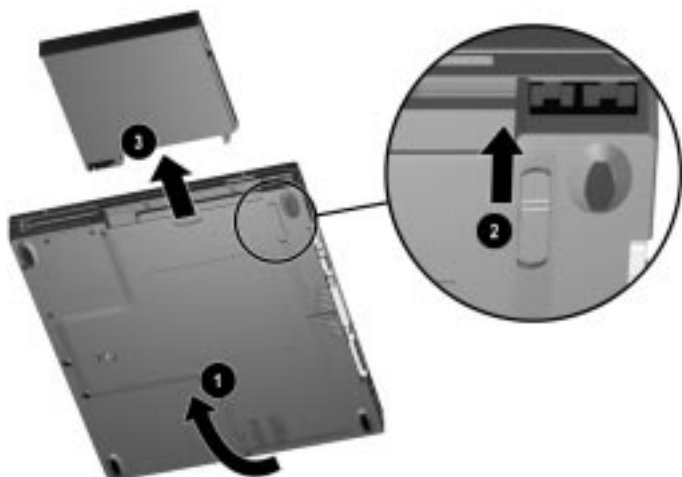
1. If a battery pack is your only power source, initiate Hibernation.
2. With the MultiBay facing you, tilt the computer up ❶ and slide the MultiBay release latch toward the opening of the bay ❷.
3. Grasp the edge of the battery pack at the notch under the battery pack and pull it out of the MultiBay ❸.

Inserting a MultiBay Battery Pack

With the battery pack charge level lights facing up and the battery contacts facing in, insert the battery pack into the MultiBay.

If the computer is in Hibernation, slide the power switch to resume normal operation.

Storing Battery Packs

To prolong the battery charge of a stored battery pack, store it in a cool, dry place. High temperatures cause a battery pack to lose its charge more quickly, thus reducing battery life.

The recommended storage temperature range is from 32°F to 86°F (0°C to 30°C).

> **CAUTION:** To prevent damage to a battery pack, do not expose it to high temperatures for extended periods of time.

Maximizing Battery Life

Battery pack operating time varies depending on the system components, options, and applications being used. You can maximize battery operating time by controlling the energy required by the computer and the energy stored in the battery pack.

The display, processor, CD-ROM drive, DVD-ROM drive, and hard drive components use the majority of battery power.

To maximize battery pack life

- Select the High level of power management through Computer Setup.
- Initiate Suspend, Hibernation, or turn the computer off when not in use.
- Reduce the display brightness and select a shorter screen save timeout.
- Calibrate the battery pack periodically to maintain the accuracy of the battery gauge.
- Keep a battery pack in the computer when connected to an external power source.
- Disconnect external equipment that does not have its own power source when not in use. (External equipment connected to the computer drains the battery pack.)
- Exit modem and networking programs when not in use.
- Stop or remove any PC Cards when not in use.
- Format diskettes using external power. (Formatting increases battery pack drain.)

Recycling Used Battery Packs

To find out if the battery pack recycling program is available in your geographical location, check the worldwide telephone numbers in Appendix A. If a number for recycling is not listed for your area, contact your Compaq authorized dealer, reseller, or service provider.

For more information, see the "Battery Notice" in Appendix B.

chapter 5

POWER MANAGEMENT

This chapter provides helpful information on maintaining and
managing battery pack power. You also will find useful
information about the Suspend and Hibernation features.

Leaving the Computer On

When you need to leave your computer unattended but you do not
want to turn it off, conserve power by initiating Suspend or
Hibernation.

NOTE: Frequent discharge/recharge cycles shorten battery
pack life.

Turning the Computer Off

To turn the computer off,

1. Save open files.

2. Shut down the computer.

The Start → Shut Down command will close all applications and
automatically power off the system. This eliminates the need to
slide the power switch.

If you are working in DOS or if you experience a severe system
crash, you can use the power switch to turn the computer off.

Managing Power

Your computer comes with a collection of power management
features that allow you to extend battery operating time and
conserve power. Use power management to monitor most
computer components such as the hard drive, processor, and
display.

Accessing Power Management

In Windows 95, select Start→Settings→Control Panel→Power to view or adjust settings in Power Properties.

NOTE: If you are using Windows NT 4.0, select Compaq Power instead of Power. If you are using Windows 98, select Power Management.

Power Management Levels

To extend the life of your batteries, use the Battery Conservation tab in Power Properties. If you are using Windows 95, select Start →Settings→Control Panel→Power to access Power Properties.

NOTE: If you are using Windows NT 4.0, select Compaq Power instead of Power. If you are using Windows 98, select Power Management.

You can customize the level of battery conservation or select a preset power management levels.

Suspend

Benefits of Using Suspend

- Puts the computer to sleep for up to one week with a fully charged battery pack.

- Uses very little power.

- Saves your place in your applications.

- Shuts down most major components such as hard drive, processor, and display.

When you initiate Suspend, system information is saved in random access memory (RAM).

NOTE: If you are using Windows 98, the term Standby is used instead of Suspend. See the Microsoft online help for more information.

Initiating Suspend

Suspend can be initiated by the user or by the system (computer).

■ User-initiated Suspend:

  ■ Initiate Suspend anytime by pressing the suspend button.

  ■ Initiate Suspend by selecting Suspend from the Windows Start menu.

■ System-initiated Suspend:

  ■ Initiates after the default time limit has expired or when a user selects timeout during normal battery operations.

  ■ Initiates when the system reaches a critical low battery condition and Hibernation has been disabled.

⚠ **CAUTION:** If Hibernation is disabled, the computer does not initiate Hibernation when a critical low battery condition is reached. When this occurs, all unsaved data is lost.

NOTE: When you close the display while the computer is on, the screen clears, but the computer IS NOT in Suspend.

When Suspend is initiated, the

- Screen clears.
- System-on light blinks.

NOTE: During Suspend the screen is blank. However, unlike a powered-off state, the computer turns back on when the suspend button is pressed.

Exiting Suspend

- If Suspend was initiated because the timeout expired, exit by pressing the suspend button once or sliding the power switch.
- If Suspend was initiated because Hibernation has been disabled and the system reaches a critical low battery condition, exit Suspend in one of these ways:
  - Connect the computer to the external AC Adapter and connect to external power.
  - Connect the computer to the external AC Adapter connected to the optional Automobile Power Adapter/Charger or optional Aircraft Power Adapter.
  - Dock the computer in the optional desktop expansion base or convenience base.
  - Replace the battery pack, then press the suspend button or slide the power switch.

When you exit Suspend, the computer

- System-on light stops blinking and remains lighted.
- Returns previously displayed information to the screen.

NOTE: When you exit Suspend, your information returns to the screen at the point where Suspend was initiated. No information is lost provided you do not lose power while the computer is in Suspend.

Hibernation

Hibernation is a safeguard condition in which all information in system memory is saved to the hard drive and power to the computer is turned off. When you resume your work, your information is returned to the screen exactly where you left off.

Benefits of Using Hibernation

■ When Hibernation is initiated, no information is lost. There is no limit to the amount of time the computer can remain in Hibernation, since the computer is turned off and there is no drain on the battery pack.

■ Hibernation can be used as a placemarker. For example, it is useful when you are making a presentation away from the office. You can do all the preparation in advance, mark your place by initiating Hibernation, and be ready to make your presentation as soon as you arrive.

■ Hibernation is a safeguard feature that saves information should the computer reach a critical low battery condition while it is left unattended.

Initiating Hibernation

Hibernation can be initiated by the user or by the system (computer).

NOTE: Hibernation cannot be initiated when the computer is docked in the desktop expansion base or convenience base.

■ User-initiated Hibernation occurs when you press **Fn** and the suspend button simultaneously. These keys can be pressed at any time and from anywhere within an application.

■ System-initiated Hibernation occurs when

■ The computer is turned on and left unattended, and a critical low battery condition occurs.

■ The Hibernation timeout occurs.

CAUTION: If Hibernation is disabled, the computer does not initiate Hibernation when a critical low battery condition is reached. When this occurs, all unsaved data is lost.

NOTE: Batteries that have not been properly calibrated may not have enough power to support a system-initiated Hibernation at critical low battery.

When the system initiates Hibernation, it

■ Clears the screen.

■ Saves all current information in memory to the hard disk.

■ Turns off the computer.

Enabling/Disabling Hibernation

Hibernation is automatically enabled when you first set up your computer. It is recommended that you enable Hibernation at all times to safeguard against possible data-loss in a critical low battery condition. In order for Hibernation to work, it must allocate space on your hard drive equal to the amount of random access memory (RAM) installed. To free up disk space, you can disable Hibernation.

To disable or enable Hibernation in Windows 95, select Start → Settings → Control Panel → Power→ Hibernation tab → off/on.

NOTE: If you are using Windows NT 4.0, select Compaq Power instead of Power. If you are using Windows 98, select Power Management.

If you upgrade memory, the computer increases the Hibernation file size to accommodate the additional RAM. When the Hibernation file increases, it requires more hard disk space.

Exiting Hibernation

Select one of the following methods:

- If Hibernation was user-initiated or a low battery condition has been resolved, slide the power switch to turn on the computer.
- If the computer is in a critical low battery condition, insert a fully charged battery pack or connect an external power source.

The computer exits Hibernation. The information saved to the hard disk returns to the screen at the point where Hibernation was initiated.

Timeout

A timeout is a specified period of inactivity for the computer or its components. After this time period passes, power management shuts down the computer or its components to save battery power. For example, the hard drive component and default timeout is two minutes. Therefore, if a software application does not access information on the hard disk for two minutes, the hard drive spins down until it is accessed again.

Timeouts work with power management to conserve battery power. Battery power can be conserved by

■ Using timeouts that correspond with the preset medium (default) or high level of power conservation.

■ Using the custom level of power conservation to set your own timeouts so that they work more efficiently with your applications.

Setting Component Timeouts

You can set your own timeout values for individual components of the computer. To set component timeouts, use the following procedure:

1. In Windows 95, select Start→Settings→Control Panel→ Power to access Power Properties.

   NOTE: If you are using Windows NT 4.0, select Compaq Power instead of Power.

2. Select the Battery Conservation Settings tab.
3. Set the Battery Conservation level to Custom.
4. Using the drop-down boxes, select or type a timeout value for specific components of the computer, such as system idle and hard disk idle.
5. To save your settings, select OK when you are done. They become effective immediately and remain in effect until you change them.

Setting the Screen Saver Timeout

1. Click the right mouse button anywhere on the desktop.
2. Select Properties.
3. Select the Screen Saver tab.
4. Select a screen saver.
5. Set the Custom timeout.
6. Select OK.

chapter 6

DRIVES

As you use your computer, you will store or access data using the following types of drives:

- Hard drive
- CD-ROM drive
- DVD-ROM drive
- Diskette drive
- SuperDisk LS-120 drive

Your computer is equipped with a convenient MultiBay, which allows you to use the same drive bay for each of the above drives (at separate times).

This chapter describes the features of each drive and drive adapter.

Using Drives

The computer has two bays for drives:

- A hard drive bay that supports only a hard drive.
- A MultiBay that supports a diskette drive, SuperDisk LS-120 drive, CD-ROM drive, DVD-ROM drive, or a second hard drive.

A Hard Drive MultiBay Adapter is required to use a hard drive in the computer MultiBay.

Caring for Drives

Drives are fragile computer components that must be handled with care.

> ⚠ **CAUTION:** To prevent damage to the computer or drive, and loss of information, observe the following precautions.

- Back up a primary hard drive before removing it. Failure to back up a hard drive can result in loss of information stored on the drive.

- If there is a diskette, CD, or DVD-ROM in a drive, remove it prior to removing the drive from the computer.

- Do not remove a CD-ROM drive or DVD-ROM drive while the media tray is open. Before removing the drive, ensure that the tray is closed.

- Turn off the computer before removing or inserting a hard drive from the hard drive bay.

- Ensure that you are discharged of static electricity before handling a drive. Electrostatic discharge can damage electronic components. When handling a drive, always grasp the outer case and avoid touching the connectors. Do not use force when inserting a drive into a bay. Excessive force may damage the connectors. (Refer to Appendix C.)

- Carefully handle a drive. DO NOT DROP IT.

- Avoid exposing a hard drive to products with magnetic fields such as video and audio tape erasure products, monitors, and speakers.

- Do not spray a drive with cleaners or expose it to liquids.

- Avoid exposing a drive to temperature extremes.

- If a drive must be mailed, ship it in a suitable form of protective packaging. Shipping the drive in standard packaging may not cushion it from destructive shock, vibration, temperature, or humidity. Place a mailing label with the wording "Fragile: Handle With Care" on the mailer.

MultiBay Weight Saver

When no device is needed in the computer MultiBay, you can insert the MultiBay weight saver to reduce computer weight and to cover the MultiBay opening.

Hard Drives

⚠️ **WARNING:** To reduce the risk of personal injury from hot surfaces, allow the internal system components to cool before touching them.

Removing a Hard Drive from the Hard Drive Bay

1. Turn the computer off and close the display.
2. Tilt the computer upside down ❶.
3. Use a screwdriver to remove the security screw ❷.
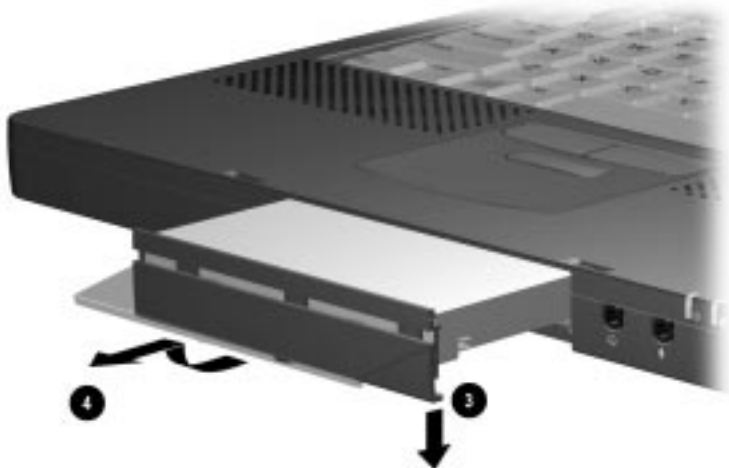
4. Turn the computer right side up.

5. Push down the hard drive tab on the front of the hard drive until it snaps away from the front of the computer ❸.

6. Lift up the front cover of the drive 90 degrees to create a handle ❹ and pull the hard drive out of the hard drive bay.

Inserting a Hard Drive into the Hard Drive Bay
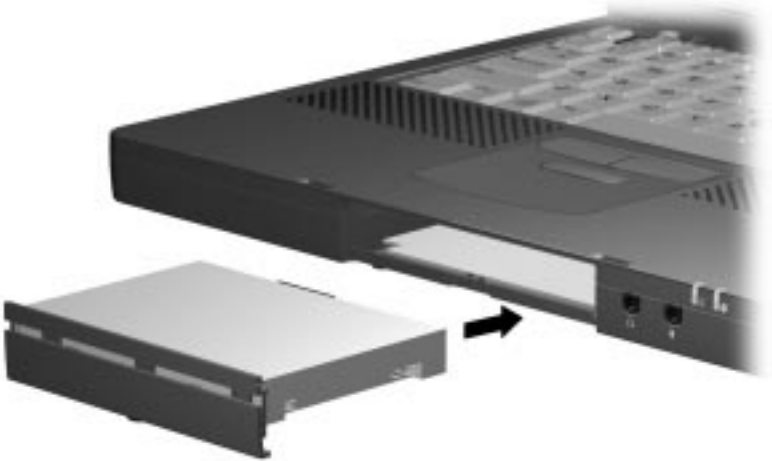
1. Turn the computer off.

2. Slide the hard drive into the hard drive bay until it is seated and the cover is flush with the front of the computer.

3. Reinsert the security screw.

Removing a Hard Drive from the MultiBay
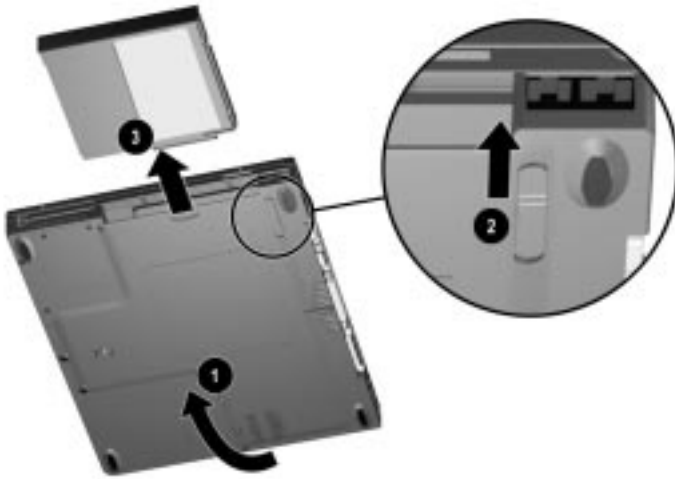
1. If the computer is on, save your work, shut down the computer, and close the display.
2. With the MultiBay facing you, tilt the computer up ❶.
3. Slide the MultiBay release latch toward the opening of the MultiBay ❷.
4. Pull the assembly (Hard Drive MultiBay Adapter and hard drive) out of the MultiBay by grasping the notch on the bottom of the drive ❸.

Inserting a Hard Drive into the MultiBay

1. Insert the hard drive into the Hard Drive MultiBay Adapter (See the following procedure).

2. With the adapter connector facing in, slide the hard drive assembly (Hard Drive MultiBay Adapter and hard drive) into the MultiBay until the connector is seated.

Inserting a Hard Drive into the MultiBay Adapter
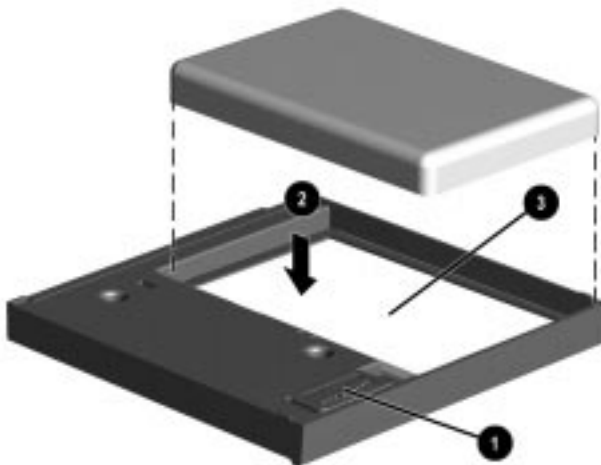
1. Push and hold the slide tab ❶ in the adapter toward the right side of the adapter.

2. Place the hard drive, label up, into the adapter ❷, and slide the drive connector toward the adapter connector ❸ until the drive is seated.

3. Release the adapter slide tab.

CD-ROM and DVD-ROM Drives

CD-ROM drives and DVD-ROM drives can be inserted and removed from the computer MultiBay.

Removing the CD-ROM Drive or DVD-ROM Drive
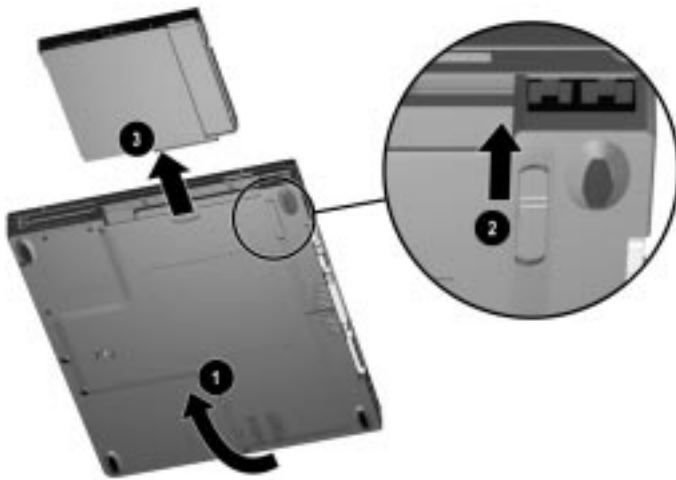
1. Remove the compact disc from the media tray.

2. Close the tray.

3. With the MultiBay facing you, tilt the computer up ❶.

4. Slide the MultiBay release latch ❷ toward the opening of the MultiBay.

5. Pull the drive out of the MultiBay by grasping the notch on the bottom of the drive ❸.

Inserting the CD-ROM Drive or DVD-ROM Drive

With the drive connector facing in, slide the drive into the MultiBay until the connector is seated.

Inserting a Disc into the CD-ROM Drive or DVD-ROM Drive

1. Turn the computer on.

2. Press the media eject button on the front panel ❶ to release the media tray.

3. Slowly pull out the tray until it is fully extended.

4. Remove the disc from its protective case and press it onto the tray spindle ❷. Handle the disc by the edges, not by the flat surfaces.

5. Push lightly on the front panel of the media tray to close it.

The drive performs a diagnostic check and automatically begins reading the table of contents (TOC) on the disc. The light on the drive turns on while the TOC is being read. The light turns off when the drive is ready to receive commands.

Removing a Disc from the CD-ROM Drive or DVD-ROM Drive

1. Turn the computer on.
2. Press the eject button on the front panel ❶ to open the media tray.
3. Slowly pull out the tray until it is fully extended.
4. Remove the disc from the tray ❷. Handle it by the edges, not by the flat surfaces.
5. Place the disc in its protective case.
6. Push the front panel of the media tray to close it.

Diskette Drive and SuperDisk LS-120 Drive

Diskette drives and SuperDisk LS-120 drives can be inserted and removed from the computer MultiBay.

Removing the Diskette Drive or SuperDisk LS-120 Drive
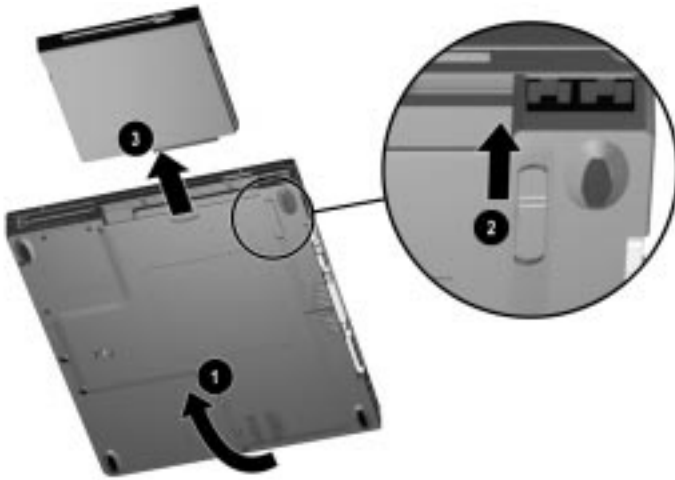
1. Remove the diskette from the drive.

2. With the MultiBay facing you, tilt the computer up ❶.

3. Slide the MultiBay release latch ❷ toward the opening of the MultiBay.

4. Pull the drive out of the MultiBay by grasping the notch on the bottom of the drive ❸.

Inserting the Diskette Drive or SuperDisk LS-120 Drive

With the drive connector facing in, slide the drive into the MultiBay until the connector is seated.

Inserting a Diskette into the Diskette Drive or SuperDisk LS-120 Drive

1. Hold the diskette by the edge covered by the label, label facing up.
2. Gently push the diskette into the drive until it clicks into place.

The media eject button ejects to show the diskette is inserted correctly.

Removing a Diskette from the Diskette Drive or SuperDisk LS-120 Drive

1 Press the media eject button to eject the diskette.

2. Remove the diskette from the drive.

Connecting the Diskette Drive
to the Parallel Connector

You can use your diskette drive externally to enable other drives to occupy the MultiBay. This allows you to access multiple drives simultaneously.

NOTE: This cable only supports the diskette drive. Do not attempt to connect any other device to the computer using this cable.

Plug one end of the drive cable into the parallel connector at the rear of your computer ❶ and the other end of the cable into the drive ❷.

chapter 7

SECURITY

Your computer has security features which prevent unauthorized users from accessing your drives. This chapter describes each of these security features.

Types of Security

Security features protect your computer and the information stored on it from unauthorized access.

■ DriveLock

Prevents unauthorized use of the hard drive when the computer is turned on, restarted, or resumed from Hibernation. It stops an unauthorized user from using your hard drive.

■ Power-On Password

Prevents unauthorized use of the computer when it is turned on, restarted, or resumed from Suspend or Hibernation.

■ Setup Password

Prevents unauthorized users from changing your computer configuration through Computer Setup. May also be used by network administrators to protect and access the configuration of computers in a network.

■ QuickLock/QuickBlank

Clears the screen and disables the keyboard and other input devices while the computer is running.

- Login Password (Windows NT 4.0 only)

  Used to log in to Windows NT 4.0. When combined with the previously mentioned security features, prevents unauthorized users from accessing your hard drive.

- Disabling devices through Computer Setup

  Prevents unauthorized use of specified computer components.

- Security screw

  Helps prevent unauthorized removal of hard drive.

- Cable lock provision

  Provides a way to secure the computer, optional desktop expansion base, or optional convenience base to a fixed object.

DriveLock Feature

Overview

DriveLock security prevents unauthorized access to hard drive applications and user data. DriveLock sets a user password and a master password for each removable hard drive in the computer.

NOTE: DriveLock protects or unlocks the computer hard drive(s) only when inserted into either the hard drive bay or the MultiBay. Do not use DriveLock if you want to use a hard drive in the desktop expansion base or convenience base. If you place a protected hard drive into the desktop expansion base or convenience base MultiBay, it will remain locked and cannot be accessed.

The correct user password must be entered when the computer is turned on before a protected hard drive can be accessed. The owner of a user password should be the day-to-day user of the hard drive. The user password will be required even if the hard drive is inserted into another computer.

The master password is used to remove DriveLock protection and to gain access to the hard drive instead of the user password. The owner of the master password may be the system administrator.

Establishing DriveLock Protection

⚠ **CAUTION:** If you forget both the user password and master password, the protected hard drive will permanently be unusable. Record your master password and keep it in a secure location physically separate from the computer.

NOTE: If you open Computer Setup from a Windows restart, DriveLock settings are not accessible.

If you forget the user password, the master password can be used to unlock a protected hard drive and reset the user password.

1. Run Computer Setup.

2. Select the Security Menu using the left or right arrow key.

3. Select DriveLock passwords and press **Enter**.

4. Select the location of the hard drive you want to lock (hard drive bay or MultiBay) and press **Enter**.

5. Select Protection Enable using the left or right arrow key and press **Enter**.

6. Read the warning and press **F10** if you want to continue.

7. Type your user password and type it again to verify it. (You may use up to 32 alphanumeric characters, and you may use the same password you are using for the power-on password.)

   NOTE: Type carefully because the password does not display as you type it.

8. Press **F10**.

9. Type your master password and type it again to verify it. (You may use up to 32 alphanumeric characters, and you may use the same password you are using for the power-on password.)

   NOTE: Type carefully because the password does not display as you type it.

10. Press **F10**.

11. Read the warning, type "DriveLock" if you want to continue, and press **F10**.

12. Exit Computer Setup. Select File→ Save changes and exit and press Enter. When prompted to confirm your choice, press **F10**.

When the DriveLock password prompt displays, enter your user or master password.

Changing the User or Master Password

If you forget your user password, you can access your hard drive with the master password. Record the user and master passwords and keep them physically separate from the computer.

NOTE: If you open Computer Setup from a Windows restart, DriveLock settings are not accessible.

1. Run Computer Setup.

2. Select the Security Menu, then DriveLock passwords and press **Enter**.

3. Select the drive for which you want to change the password and press **F10**.

4. Type your current password in the Old Password field.

5. Type your new password in the New Password field and type the new password in the Verify New Password field. (You may use up to 32 alphanumeric characters, and you may use the same password you are using for the power-on password.)

   NOTE: Type carefully because the password does not display as you type it.

6. Press **F10**.

7. Exit Computer Setup. Select File→ Save changes and exit. Press **Enter**. When prompted to confirm your choice, press **F10**. The changes will take effect when you exit Computer Setup.

Removing DriveLock Protection

NOTE: You must know the master password to delete the user password. If you open Computer Setup from a Windows restart, DriveLock settings are not accessible.

1. Run Computer Setup.

2. Select the Security Menu with the right or left arrow key.

3. Select DriveLock Protection and press **Enter**.

4. Select the drive you want to remove protection from and press **F10**.

5. Select Protection Disable.

6. Type your current master password.

7. Exit Computer Setup. Select File→Save changes and exit and press **Enter**. When prompted to confirm your choice, press **F10**. The changes will take effect when you exit Computer Setup.

Power-On Password

Using the Power-On Password

After you set the power-on password, you should enter it each time you turn on or restart the computer.

If QuickLock/QuickBlank is enabled, you must enter the power-on password every time you resume from Suspend or Hibernation.

When the power-on password prompt displays, enter your power-on password.

If you type the password incorrectly, you are prompted to reenter it up to three times.

Setting the Power-On Password

The power-on password prevents unauthorized use of the computer when it is turned on, restarted, or resumed from Suspend or Hibernation.

To set the power-on password

1. Select Start→Settings→Control Panel→Passwords →Computer Security tab.

2. Select the Set button.

3. Enter your password twice.

   NOTE: Type carefully because the password does not display as you type it.

4. Select OK→OK to exit.

The password is not case sensitive. However, you must use the same keys each time you enter the password. For example, the numbers at the top of the keyboard are not recognized as being the same numbers in the embedded numeric keypad.

NOTE: The power-on password can also be set through Computer Setup.

Changing the Power-On Password

⚠ **CAUTION:** You cannot use the computer if you forget your power-on password. Record the password and put it in a safe place.

1. Turn on the computer.

2. Find the keyboard password symbol for your keyboard language.

3. Type in sequence at the password prompt: your current password, keyboard password symbol, your new password, keyboard password symbol, your new password. (Refer to "Keyboard Password Symbols" later in this chapter.)

4. Press **Enter**.

Deleting the Power-On Password

To delete your password, type in the old password and the keyboard password symbol, then press **Enter.**

Refer to "Keyboard Password Symbols" later in this chapter.

Setup Password

Setting the Setup Password

The setup password prevents unauthorized users from changing your computer configuration through Computer Setup. Setup passwords may also be used by network administrators to protect and access the configuration of computers in a network.

1. Run Computer Setup.

2. Select the Security Menu.

3. Select setup password and press **Enter.**

4. Type your setup password and type it again to verify it.

   NOTE: You can use the same password for both the power-on and setup passwords. Type carefully because the password does not display as you type it.

5. Press **F10.**

6. Exit Computer Setup. Select File→Save changes and exit and press **Enter.** When prompted to confirm your choice, press **F10.**

⚠ **CAUTION:** You cannot change the computer configuration if you forget your setup password. Record the password and put it in a safe place.

Changing the Setup Password

1. Run Computer Setup.

2. Find the keyboard password symbol for your keyboard language.

3. Type in sequence at the password prompt: your current setup password, keyboard password symbol, your new password, keyboard password symbol, your new password.

4. Press **Enter**.

The new password takes effect the next time you turn on your computer.

Deleting the Setup Password

1. Run Computer Setup.

2. Find the keyboard password symbol for your keyboard language.

3. Type in sequence at the password prompt: your current setup password, keyboard password symbol.

4. Press **Enter**.

Keyboard Password Symbols

Use these keyboard password symbols for changing or deleting the power-on and setup password.

Country Keyboard	Keyboard Symbol
Belgian	**=** (equal sign)
Danish, German, Italian, Latin American, Norwegian, Portuguese, Spanish, Swedish/Finnish, Swiss, Taiwanese	**-** (hyphen)
French	**!** (exclamation point)
French/Canadian	**é** (e acute)
Japanese, Korean, United Kingdom, United States	**/** (slash)

Enabling/Disabling Quick Controls

The QuickLock/QuickBlank feature must be enabled before you can initiate it with the **Fn**+**F6** hotkeys. This feature will remain enabled until you disable it.

To enable or disable QuickLock/QuickBlank

1. Access Password Properties by selecting Start→Settings→Control Panel→Passwords→Computer Security tab.

2. Under the Quick Controls section, click in the box to enable/disable QuickLock, QuickBlank, or QuickLock on Suspend. An X in the box indicates that QuickLock/QuickBlank is enabled.

Disabling and Enabling Devices

Use Computer Setup to disable or enable devices such as the diskette drive, diskette drive boot ability, serial port, infrared port, parallel port, and PC Card slots.

1. Run Computer Setup.

2. Select Security→Device Security, enter your preferences, then press **F10.** You will need to enter your setup password if it is set.

   NOTE: Settings for a DVD-ROM drive can be entered in the CD-ROM field.

3. Select File→Save Changes and Exit, then press **Enter**.

4. When prompted to confirm your action, press **F10.** Your computer will restart with the new preferences.

IMPORTANT: Devices disabled in Computer Setup cannot be enabled in the operating system. If you are disabling a device as a security measure, use the Computer Setup Security Menu.

Using the Cable Lock

The security slot accommodates a cable lock so that the computer can be physically secured to a work area.

1. Loop the cable around a heavy, fixed object to which you want to secure the computer.

2. Insert the cable lock end of the cable through the loop end of the cable.

3. Insert the lock into the security slot.

4. Lock with the key.

NOTE: The cable lock can be purchased from Kensington Microware Limited or Compaq authorized dealers, resellers, and service providers worldwide. Ask for the Kensington MicroSaver Security System, Model 64068.

chapter 8

# OPTIONAL INTERNAL MODEM

Modem Overview

An optional internal modem may be built into your computer model. It provides data communications and fax functionality for applications running under Windows 95, Windows 98, and Windows NT 4.0. Preloaded software drivers are required for modem operation and allow the modem to easily communicate with software applications.

The internal modem supports standard analog modem communication protocols (for speeds up to 33.6 Kbps) as well as up to the ITU-compatible V.90 and industry standard K56flex 56K protocols for higher speeds.

IMPORTANT: The V.90 and K56flex protocols allow faster downloads only from V.90 K56flex compliant digital sources. Maximum achievable download transmission rates are currently unknown, may not reach 56Kbps, and will vary with line conditions.

Without having to make hardware changes, the modem may be configured for operation in a variety of countries. An integrated RJ-11 jack provides for simple connectivity to phone cables.

Connecting the Modem
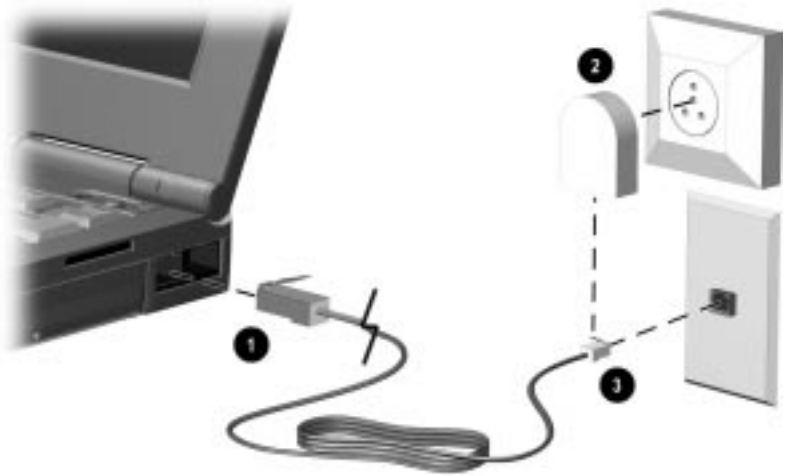
⚠️ **WARNING:** To reduce the risk of electrical shock, fire, or damage to the equipment, do not plug a telephone cable into the Ethernet RJ-45 jack. Always ensure that the modem line is disconnected from the telephone network when opening the equipment's enclosure.

To connect the modem to a standard telephone wall jack

1. Connect one end of the modem cable into the RJ-11 jack ❶. The RJ-11 jack is the one on the left.

   IMPORTANT: The internal modem uses a universal DAA (Direct Access Arrangement) that supports multiple countries. However, some countries may require an adapter to connect the modem to the telephone wall jack ❷.

   The modem cable includes EMI suppression circuitry near the end of the computer. For continued EMI emissions compliance, plug that end of the cable into the computer.

2. Plug the opposite end of the cable into a standard telephone wall jack ❸.

   IMPORTANT: Wall jacks for digital PBX systems may resemble standard telephone jacks but are not compatible with analog devices such as modems. Be sure the modem cable is connected to a regular analog phone line. Plugging the modem into a digital line is not recommended. The modem includes protective circuitry against the digital lines that may produce a beep or a series of beeps if it detects excess current.

Understanding How the Modem Works

The modem serves two major functions:

- **Data communications**—allows your computer to send information to and receive information from an online service, a host mainframe computer that provides electronic mail, and even other personal computers.
- **Facsimile (fax)**—allows your computer to both send and receive text and images from facsimile (fax) machines or other computers.

After setting up your software, you are ready to start using your modem. In most cases, if you are using communications and fax software, the software will control the modem and you will not need to use the AT command set. Simply select the internal modem as the preferred communication device in your application.

If you prefer to configure the modem using AT commands, you can access them in two locations:

- Compaq Web site—www.compaq.com/support/portables.
- Preinstalled on your computer—select Start→Compaq Information Center→Modem Commands

NOTE: The maximum connection speed on a call is determined by the speed of the slowest modem on the connection. Your modem will automatically negotiate the fastest possible speed with the remote modem.

Changing the Country Selection

The internal modem is configured to meet operating approval in the country where you purchased your computer. If the modem is used in other countries during travel, the country selection setting for the modem needs to change to meet the telecommunications regulations for that country.

To determine which type of modem you have, select Start→Settings→Control Panel→Modems:

- If "3Com" is not part of the modem name, select Start→Settings→Control Panel→Modems→Dialing Properties, then select the country where you will be using the modem.

■ If the label "3Com" is at the end of the modem name, select Start➔Programs➔Compaq internal modem➔WorldPort ➔General tab, then select the country where you will be using the modem.

Software Overview

You can operate your modem with software that is preinstalled in your computer.

■ **In Windows 95** refer to your operating system documentation for information about using Microsoft Fax Client.

■ **In Windows 98 or Windows NT 4.0** refer to your operating system documentation for information about using RingCentral Fax.

For a list of optional communications software compatible with your modem, contact a Compaq authorized dealer, reseller, or service provider near you.

IMPORTANT: If Hibernation initiates or a low battery condition occurs while you are using the modem with communications software, the modem will disconnect. Exit Hibernation or resolve the low battery condition, then restart the communications software to restore the original modem settings.

chapter 9

MEMORY UPGRADE

You can upgrade the memory (RAM) capacity of your computer with optional memory expansion boards. For ordering information, go to the Compaq Web site at www.compaq.com or refer to Appendix A to contact a Compaq authorized dealer, reseller, or service provider. To view the amount of existing random access memory (RAM) in the system, select Start→ Settings→Control Panel→Compaq Diagnostics.

Removing the Keyboard

⚠ **WARNING:** Failure to unplug the power cord and remove the battery pack before installing a memory expansion board can damage the equipment and expose you to the risk of electrical shock.

You must remove the computer keyboard in order to access the memory expansion board slots.

1. Shut down the computer.

   NOTE: If you are unsure whether the computer is off or in Hibernation, turn the computer on by sliding the power switch, then shut it down.

2. Disconnect all external devices connected to the computer.

3. Disconnect the power cord and remove any battery packs from the computer.

4. Release the four tabs located along the top of the keyboard to release the keyboard from the computer ❶.

5. Carefully fold the computer keyboard away from the computer ❷.

Removing a Memory Expansion Board
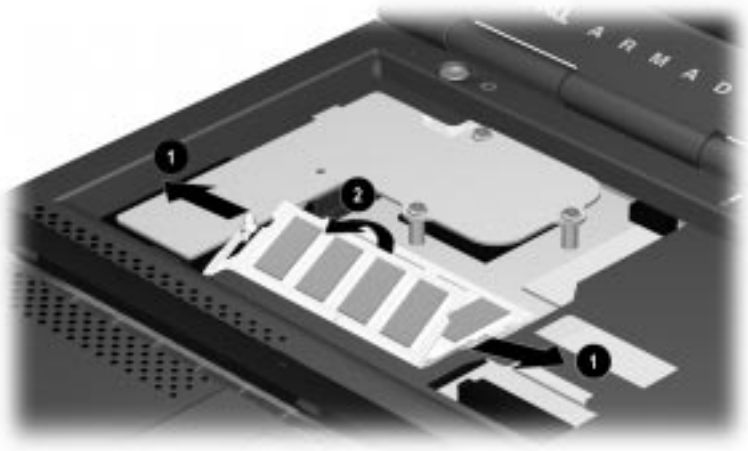
1. Refer to Appendix C to prevent electrostatic damage to any computer components.

2. Pull away the retention clips on each side of the memory expansion board ❶. The memory expansion board tilts upward ❷.

3. Lift the edge of the memory expansion board to a 45-degree angle and gently slide it out of the memory expansion slot.

4. Place the removed memory expansion board in an electrostatic-safe container.

Inserting a Memory Expansion Board

All memory expansion boards supported by the computer

- Can be used in either of the two memory expansion slots.
- Are keyed (notched) to ensure correct positioning.

1. Slide the memory expansion board into an empty memory expansion slot at a 45-degree angle ❶ until it is seated.

2. Push the memory expansion board down until the retention clips ❷ snap into place.
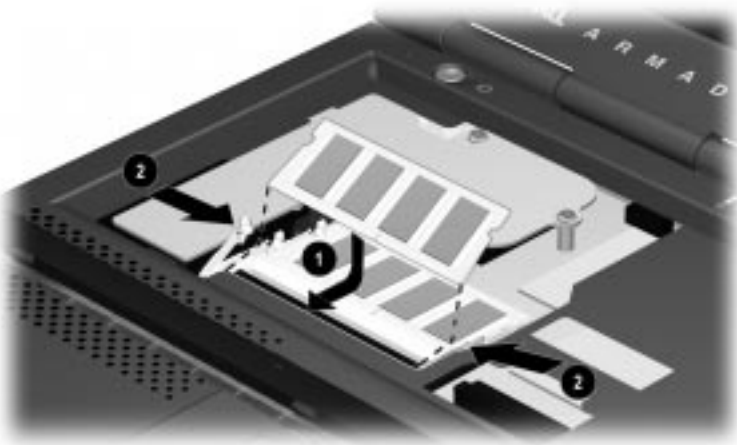
Replacing the Keyboard

Line up the bottom edge of the keyboard and fold it back into place ❶. Snap the four tabs at the top of the keyboard ❷.
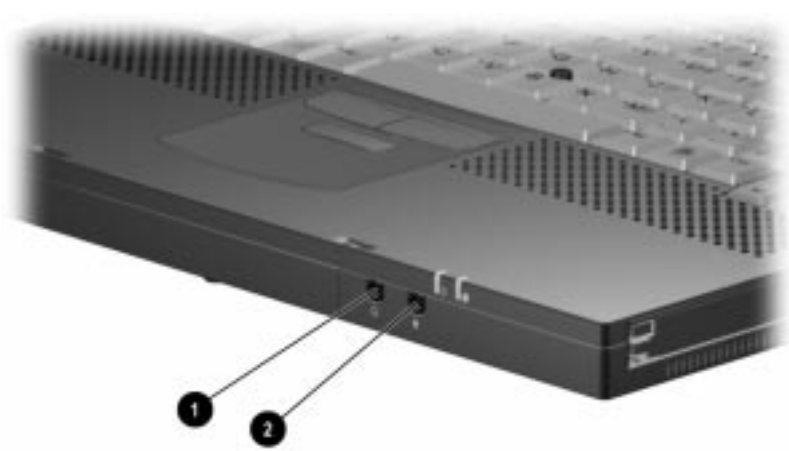
chapter *10*

ADDITIONAL FEATURES

Your computer comes equipped with the following additional features:

■ Audio connections, including microphone and speakers

■ Infrared connection capability

■ CardBus PC Card slots

■ Intelligent Manageability software

This chapter discusses each of these features in detail.

Identifying Audio Connections

The computer has two audio connections:

❶ stereo speaker/headphone jack

❷ microphone jack

> ⚠ **CAUTION:** Use only a 3.5-mm stereo plug in the stereo speaker/headphone jack. A mono plug can result in damage to the computer.

IMPORTANT: A mono electret condenser microphone is recommended for the microphone jack. Using a dynamic microphone is not recommended.

Using Internal and External Microphones

The computer has both an integrated mono microphone located on the display ❷ and an external microphone jack ❶ located on the front of the computer. Use either of these to record sound, enhance an interactive demonstration, or to take advantage of business programs and presentation software having audio capability.

The internal microphone is disabled when the external microphone jack is used.

Using Internal and External Speakers

The integrated stereo speakers ❶ support sound output for all audio sources. Headphones or external speakers can be connected to the computer through the stereo speaker/headphone jack ❷.

When external speakers or headphones are connected to the stereo speaker/headphone jack, the internal speakers are disabled.

External speakers:

■ Provide more separation for the left and right audio channels.

■ Produce more volume with amplified speakers.

■ Produce higher quality sound.

> **CAUTION:** Use only a 3.5-mm stereo plug in the stereo speaker/headphone jack. A mono plug can result in damage to the computer.

Controlling Audio Volume

⚠ **WARNING:** To reduce the risk of personal injury to hearing, check the volume level of software applications before you put on headphones.

Control the audio volume using either of the following methods:

- Press the **Fn+F5** hotkeys to adjust the overall system volume.
- Double-click the speaker icon on the Windows taskbar to access the master volume slide controls. These controls allow you to adjust the volume of individual devices.

Infrared Connections

NOTE: Infrared-equipped computers are IrDA-compliant (4Mbps standard). Infrared performance may vary depending on performance of infrared peripherals, distance between infrared devices, and applications used.

The infrared port on your computer allows wireless communication between your computer or desktop expansion base and other infrared-equipped devices. Operating system support for infrared communication is currently available with Windows 95 and Windows 98.

NOTE: For more information on infrared connections, see the Microsoft online help.

The infrared port uses an invisible beam of infrared light to communicate with another infrared-equipped device.

If you are running Windows 95 or Windows 98 to establish an infrared link,

- Be sure the infrared ports on both computers are turned on and facing each other at a distance no greater than 1.5 feet (about 0.5 meter).
- Avoid moving the infrared ports away from each other during data transmission.
- Avoid interference from remote control units, such as wireless headphones or audio devices, pointed at the infrared ports.
- Avoid direct sunlight, fluorescent light, or flashing incandescent light close to the infrared ports.
- Keep the path between the infrared ports free of any objects that might interfere with data transmission.

NOTE: Do not point one of the ports more than 30 degrees (plus or minus 15 degrees off the center line) away from the infrared port of the device you are connecting with.

Types of PC Cards

There are three PC Card types set by the PCMCIA standards association: Type 1 (3.3 mm), Type 2 (5.0 mm), and Type 3 (10.5 mm).

Type II and Type III PC Cards also come in extended PC Cards.

The computer can support up to two PC Cards simultaneously:
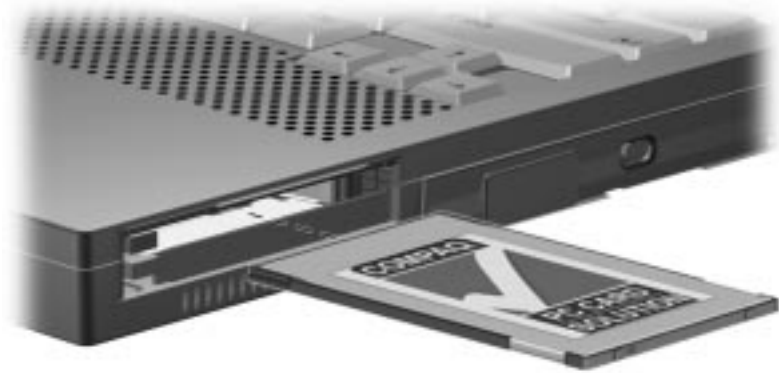
■ one Type I card with one Type II card

■ two Type I cards

■ two Type II cards, or

■ one Type III card

The computer supports several kinds of PC Cards, such as network cards, hard drive cards, memory cards, and fax/modem cards.

Inserting a PC Card

⚠ **CAUTION:** To prevent damage to the connectors, use minimal pressure when inserting a PC Card into a PC Card slot.

To insert a PC Card into the computer

1. Hold the PC Card with the label side up.

2. Insert the 68-pin side of the PC Card into the slot, pushing gently.

If you are running Windows 95 or Windows 98, you do not need to turn off the computer or initiate Suspend before inserting a PC Card.

**NOTE:** If the computer is turned off or in Suspend, the card is not configured until you turn on the computer or exit Suspend.

If you are running Windows NT 4.0 with CardWare provided by Compaq, you should be able to insert most PC Cards while the computer is turned on. Contact your PC Card vendor directly for information about the level of support they offer for "hot insertion" with CardWare.

If you are running Windows NT 4.0 without CardWare provided by Compaq, turn off the computer.

IMPORTANT: Before a new PC Card can be used, it may be necessary to perform an initial setup procedure. Be sure to follow the PC Card manufacturer's instructions for installing the needed card-specific device drivers.

Removing a PC Card
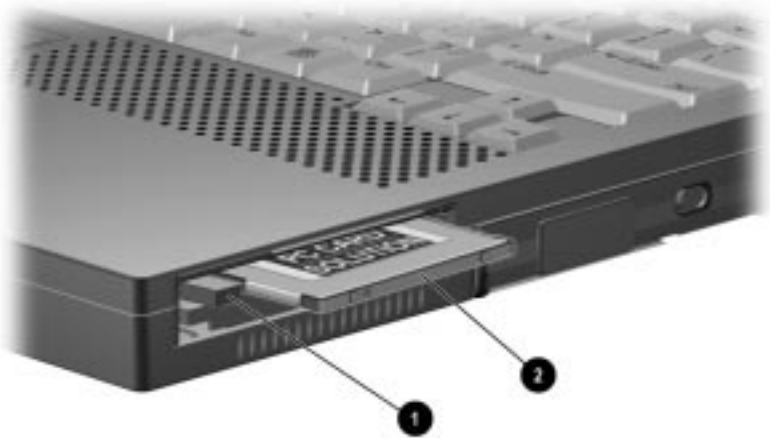
If you are running Windows 95 or Windows 98, double-click the PC Card icon in the taskbar. Select the PC Card you want to stop and click Stop Card. A message displays when the PC Card can be safely removed.

⚠ **CAUTION:** If you are running Windows 95 or Windows 98, you should always stop PC Cards before removing them to prevent damage to the PC Card or computer.

If you are running Windows NT 4.0 without CardWare, you must turn off the computer before removing a PC Card.

To remove a PC Card from the computer

1. Depress the fully extended button to eject the PC Card from the slot ❶.

2. Remove the PC Card ❷.

NOTE: If you are running Windows 95, Windows 98, or Windows NT 4.0 with CardWare, the computer beeps twice if it is turned on when the PC Card is removed.

Enabling/Disabling PC Card Slots

When PC Cards are installed in your computer, they draw power from the system even when they are not in use.

If you are running Windows 95 or Windows 98, stop or remove PC Cards when they are not in use to conserve power.

If you are running Windows NT 4.0, remove PC Cards when they are not in use to conserve power.

PC Card Device Drivers

Device drivers are programs or data files containing information needed to run a particular PC Card. Most of the device drivers you need are preinstalled on the computer.

NOTE: In order to save available memory, some device drivers are not turned on.

Some types of PC Cards, such as network cards, Global Positioning System (GPS) cards, SCSI cards, audio cards, and multifunction cards, require an additional software device driver specific to the PC Card to function properly. This device driver is provided by the PC Card manufacturer and should be installed according to the manufacturer's instructions. Do not install any other PC Card software on the computer such as Card and Socket Services, even if prompted to do so.

⚠ **CAUTION:** Compaq has rigorously tested the PC Card software preinstalled on the computer. If you install Card and Socket Services or enablers provided by other vendors over software preinstalled on the computer, your computer may no longer work properly with all of your PC Cards.

Zoomed Video

Both PC Card slots are designed for Zoomed Video PC Cards. Use of Zoomed Video cards is not supported under Windows NT 4.0 at this time. A Zoomed Video PC Card enables higher overall system performance for full motion video playback.

Intelligent Manageability

Intelligent Manageability consists of preinstalled software tools for the computer and Compaq servers that assist in tracking, troubleshooting, protecting, and maintaining the computer. It provides the following functions:

- **Asset Management**—provides detailed configuration and diagnostic information.
- **Fault Management—**prevents, predicts, and alerts of impending hardware problems.
- **Security Management—**protects unauthorized access to data and components.
- **Configuration Management—**optimizes the computer by providing the latest drivers, utilities, and software, which are available on CD-ROM and the Compaq Web site at www.compaq.com/support/portables.

NOTE: For further help with Intelligent Manageability, select Start➔Compaq Information Center➔Intelligent Manageability.

Accessing the Web Agent

Your computer may have a preinstalled Web Agent that enables you and your Information Services department to view computer configuration information using Web technology. To access this feature, select Start→Compaq Information Center→Insight Web Management.

If your computer does not have a preinstalled Web Agent, you can download it from the Compaq Web site at www.compaq.com.

Asset Management

AssetControl enables the user to retrieve component information when on the road or connected to the network.

AssetControl also enables the network administrator to remotely retrieve information from any Compaq computer connected to the network. The information can be used to assist in tracking and maintaining the computer and its components. It provides the following information:

- **Inventory information**—The network administrator can retrieve information about the computer over the network by using Compaq Insight Manager or any PC management tool provided by Compaq Solution Partners. Asset control information retrieved from the computer includes
  - Manufacturer, model, and serial number of Compaq computers, monitors, hard drives, battery packs, memory boards, processor speeds, and operating systems
  - Asset tag
  - System board and ROM revision levels
  - BIOS settings
- **Diagnostic information**—Compaq Diagnostics for Windows includes information on hard drives, ports, and video, sound, and other components. This application also allows the user to run multithreaded tests on hardware components. If problems are found, recommendations are provided.

All of the above information can be viewed, printed, or saved.

Fault Management

Fault Management features minimize downtime and data loss by monitoring system performance and generating the following alerts:

- **Hard drive alert**—warns you up to 72 hours in advance of impending hard drive problems and can automatically start optional backup software.

- **System temperature alert**—reports overheating. As the system temperature rises, this feature first adjusts fan speed and other cooling components, then displays an alert, then shuts down the system.

- **Battery pack alert**—reports charging problems and battery pack failure.

- **Monitor alert**—diagnoses and displays external monitor operational problems.

- **Memory alert**—reports memory board configuration changes when a memory board is removed, added, or reconfigured. It also provides the previous and current configurations for comparison.

The alerts work with or without network connection. If your computer is not connected to the network, your network administrator cannot receive alerts from your computer.

Fault Management Alerts

Alerts can be enabled, disabled, and tested, and software can be set to back up information whenever a hard drive alert occurs.

- While the computer is connected to a network, alerts pop up on the computer display and are simultaneously reported to the network console.

    NOTE: A battery charging problem alert is reported only on the computer display.

- When the computer is not connected to a network, the user will receive a local alert.

To set alerts, select the Intelligent Manageability icon in the system tray.

Security Management

Security Management features customize system security.

- **Power-On and Setup Passwords**—prevent unauthorized access to your information and computer configuration.
- **DriveLock**—prevents unauthorized access to hard drives.
- **Device disabling**—prevents unauthorized data transfer through modems, serial ports, parallel ports, and infrared ports on the computer and an optional docking station.
- **QuickLock/QuickBlank**—locks the keyboard and clears the screen.
- **Ownership Tag**—displays ownership information during system restart.

Configuration Management

Configuration Management optimizes software upgrade and customer support procedures. Compaq provides you with support software to optimize the performance of your computer. This support software is accessible through a monthly CD-ROM subscription. Support software can also be downloaded from the Compaq Web site at www.compaq.com/support/portables.

chapter 11

COMPUTER SETUP AND DIAGNOSTICS

Selecting Computer Setup or Compaq Diagnostics for Windows

The computer features two system management utilities:

■ **Computer Setup** is a system information and configuration utility that can be used even when your operating system is not working or will not load. It includes custom settings that are not available in Windows.

To configure a device in Windows NT 4.0, you must use Computer Setup.

■ **Compaq Diagnostics for Windows** is a system information and diagnostic utility that is used within your Windows operating system. Use Compaq Diagnostics for Windows to test system components and to display system information whenever possible.

To configure a device in Windows 95 or Windows 98 use Compaq Diagnostics for Windows if a device is not configured by the operating system.

NOTE: It is not necessary to configure a device connected to a USB connector on the computer or an optional docking base.

Using Computer Setup

All information and settings in Computer Setup are accessed from the File, Security, or Advanced menus. The items on each of these menus are described on the following pages.

NOTE: Your settings in Computer Setup are not affected by updating the system ROM.

To view information or change a setting in Computer Setup

1. Turn on or restart the computer. When the blinking cursor appears in the upper-right corner of the screen, press **F10**.

   ■ To change the language, press **F2**.

   ■ To view navigation information, press **F1**.

   ■ To return to the Computer Setup menu from anywhere in Computer Setup, press **Esc**.

2. Select the File, Security, or Advanced menu.

3. To close Computer Setup and restart the computer

   ■ Select File→Ignore Changes and Exit, then press **Enter**.

   or

   ■ Select File→Save Changes and Exit, then press **Enter**.

4. To confirm your choice, press **F10**.

File Menu

Begin here	To do this
System information	■ View identification information about the computer, docking base, and battery packs. ■ View specification information about the processor, memory and cache size, and ROM date and family.
Save to floppy	Save system configuration to a diskette.
Restore from floppy	Restore system configuration from a diskette. (The diskette contains your personal configuration, so you should restore from the diskette before using the System Recovery CD-ROM.)
Restore defaults	Replace configuration settings in Computer Setup with factory default settings. (Identification information is retained.)
Ignore changes and exit	Cancel changes entered during the current Computer Setup session, then exit and restart the computer.
Save changes and exit	Save changes, then exit and restart the computer.

Security Menu

Begin here	To do this
Setup password*	Enter, change, or delete a setup password.
Power-On password*	Enter, change, or delete a power-on password.
Password options	Enable/disable: ■ QuickLock/QuickBlank. ■ Lock keyboard and pointing stick or touchpad at startup. (These features can be enabled only when a power-on password is set.)
DriveLock passwords*	Enter, change, or delete a DriveLock password.
Device security*	Enable/disable ■ Ports or diskette drives. ■ Diskette write. ■ CD-ROM or diskette startup. NOTE: Settings for a DVD-ROM can be entered in the CD-ROM field.
System IDs	Enter identification numbers for the computer, a docking base, and battery packs.

*For more information about passwords, QuickLock, DriveLock, and disabling devices, refer to Chapter 7, "Security."

Advanced Menu

Begin here	To do this
Language (or press **F2**)	Change the Computer Setup language.
Boot Options	Enable/disable ■ QuickBoot, which starts the computer more quickly by eliminating some startup tests. (If you suspect a memory failure and want to test memory automatically during startup, you may want to disable QuickBoot.) ■ MultiBoot, which enables you to set a startup sequence that can include any drives in the system.
Device Options	■ Enable/disable the embedded numeric keypad at startup. ■ Enable/disable multiple standard pointing devices at startup. When this feature is disabled, only one pointing device is activated at startup. ■ Enable/disable USB legacy support for one USB mouse and one USB keyboard. (When USB legacy support is enabled, the keyboard and mouse work without a loaded USB driver.) ■ Set an optional external monitor or overhead projector connected to a video card in a docking base as the primary device. (When the computer display is set as secondary, the computer must be shut down before undocking.) ■ Set video-out mode to NTSC (default), NTSC-J, PAL, or PAL-M. ■ Change the parallel port mode to or from EPP, standard, bidirectional, or ECP.

Using Compaq Diagnostics for Windows

1. Access Compaq Diagnostics for Windows by selecting
   Start→Settings→Control Panel→Compaq Diagnostics.

2. To select a category, choose one of two methods:
   - Select the Categories menu, then select a category from the drop-down list.
   - Select a category icon on the toolbar.

3. To run diagnostic tests
   a) Select the Test tab.
   b) In the scroll box, select the category or device you want to test.
   c) Select the Quick, Complete, or Custom test type.
   d) Select the Interactive or Unattended test mode.
   e) Select the Begin Testing button.
   f) View test information by selecting a report from the Status, Log, or Error tab.

4. To print the information or save it to a drive, select the File menu, then select Print or Save As.

5. To exit, select the File menu→Exit.

chapter *12*

CARE, TRAVEL, AND SHIPPING GUIDELINES

You may often want to travel with your computer, even if just from room to room. When traveling, you may have to ship the computer to your destination. This chapter provides helpful information regarding care, travel, and shipping.

Caring for the Computer

Keep the computer in good condition and working properly by following these guidelines:

- Keep the computer away from excessive moisture and temperature extremes. Do not expose the computer to liquids or precipitation.
- To prevent possible damage to the display, do not place anything on top of the computer when it is closed.
- Occasionally wipe the exterior of the computer and the screen with a soft, damp cloth moistened only with water. Using soap or other cleaning products may discolor the finish and damage the screen.

⚠ **WARNING:** Do not spray liquid directly on the computer screen. Excess liquid may drip down inside the computer and damage the components or result in electrical shock.

Operating Temperatures

The computer is designed to run demanding applications that require PC Cards, CD-ROM drives, DVD-ROM drives, and large amounts of RAM while maintaining full processor performance.

As a result of increased power consumption, it is normal for the computer to feel warm to hot when being used for extended periods.

The computer complies with international safety standards for temperatures of user-accessible surfaces.

Traveling with the Computer

For safety and convenience when traveling, follow these guidelines:

1. Back up your data. Do not expose your backups to electrical or magnetic impulses while stored or in transit.
2. If there is a diskette or compact disc in a drive, remove it.
3. Turn off the computer and external devices.
4. Close the computer.
5. Disconnect external equipment from the computer.
6. Close the connector cover and all exterior doors.
7. Hand-carry the computer in a briefcase or other protective case. Do not check the computer with your luggage.

Check with the airline if you plan to use the computer on the plane. In-flight computer use is at the discretion of the airline.

IMPORTANT: There are three types of airport security devices: X-ray machines (the conveyor belt device you set your bags on), magnetic detectors (the device you walk through), and security magnetic wands (the hand-held device used by security personnel). You can send your computer and diskettes through airport X-ray machines. However, Compaq recommends that you do not send your computer, compact discs, or diskettes through airport magnetic detectors or expose them to security magnetic wands.

Before traveling internationally with the computer,

- Check local customs regulations for restrictions and requirements on traveling with your computer.
- Purchase (from a Compaq authorized dealer, reseller, or service provider) a power cord for the country where you will be using the computer. These power cords are designed to meet the voltage and frequency requirements of each country.

⚠ **CAUTION:** Do not use the converter kits sold for appliances to power the computer.

Shipping the Computer

Follow these steps when shipping the computer:

1. Back up your data. Do not expose your backups to electrical or magnetic impulses while stored or in transit.
2. If there is a diskette or compact disc in a drive, remove it.
3. Turn off the computer and external devices.
4. Close the computer.
5. Disconnect external equipment from the computer.
6. Close the connector cover and all exterior doors.
7. Pack the computer and external devices in their original packing boxes, or in similar packaging with sufficient packing material to protect them and prevent shifting or movement in transit.

chapter *13*

TROUBLESHOOTING

Obtaining Update Information with Info Messenger

Compaq Info Messenger allows you to set a customized search of the Compaq Web site. By registering for this utility, you can stay up to date with software and hardware information specific to your system.

■ To access Compaq Info Messenger, go to www.compaq.com and select Info Messenger.

■ To register, follow the instructions on the Info Messenger page. When your registration is complete, you can

■ Implement your customized search whenever you prefer from the Info Messenger page.

■ Set Info Messenger to send you the information by email as it becomes available.

Info Messenger will also inform you if there are updates to the system ROM for your computer.

Checklist for Solving Problems

If you encounter some minor problem with the computer or software applications, go through the following checklist for possible solutions:

■ Is the computer connected to an external power source or does it have a fully charged battery installed?

■ Are all cables connected properly and securely?

■ Did the diskette drive contain a non-bootable diskette when you turned on the computer?

■ Have you installed all the needed device drivers? For example, if you are using a mouse, you may need to install a mouse device driver.

■ Have you installed the appropriate printer drivers?

While the computer is configured just for you, problems you encounter while working may not be unique. Eliminating the typical problems described in this section may save you time and money. If you have a problem with the computer, consider the problems and possible solutions outlined in troubleshooting. If the problem appears related to a software application, also check the documentation provided with the software. You may discover something you can resolve easily by yourself. If the condition persists, contact your Compaq authorized dealer, reseller, or service provider.

Solving Audio Problems

Problem	Possible Cause	Solution
Internal speaker does not produce sound when an external audio source is connected to the stereo line-jack.	Volume may be turned off or set too low.	■ Adjust the overall volume by pressing the **Fn+F5** hotkeys. ■ Adjust the sliding mixer controls by double-clicking the speaker icon on the Windows taskbar.
	Line input may not be connected properly.	Check line input connection.
	Headphones or speakers are connected to the stereo speaker/ headphone jack, which disables the internal speakers.	Disconnect the headphones or speakers to enable the internal speakers.
	Volume may be muted.	Uncheck the mute box in the volume properties.
External microphone does not work.	You are using the wrong type of microphone or microphone plug for the computer.	Check to see if you are using a monophonic electret condenser microphone with a 3.5-mm plug.
	The microphone may not be connected properly.	Ensure that the microphone plug is properly connected to the mono microphone jack.
	Sound source not selected.	Ensure that microphone is selected as the recording source in Control Panel → Multimedia and that the recording level is adjusted.
	Audio settings are not set correctly.	Check the game program's audio settings.
	Volume control on the computer is turned down.	Adjust the computer volume with the **Fn+F5** hotkeys.

Continued

Solving Audio Problems *Continued*

Problem	Possible Cause	Solution
No sound from headphones	Volume or mixing controls set incorrectly.	■ Adjust the overall volume with the **Fn+F5** hotkeys.
		■ Use the mixing features available by double-clicking the speaker icon on the Windows taskbar.
		■ Make sure the mute box is not checked
	Sound source not selected.	Verify that the sound source is selected in Control Panel → Multimedia.
	The headphones are connected to the wrong jack.	Check the connection.
Volume too low or too loud	Volume or mixing controls set incorrectly.	■ Adjust the overall volume with the **Fn+F5** hotkeys.
		■ Check the mixing features available by double-clicking the speaker icon on the Windows taskbar.

Solving Battery/Battery Gauge Problems

Problem	Possible Cause	Solution
Computer is beeping and battery charge light is blinking.	Battery pack charge is low.	■ Charge the battery pack by connecting to an external power source. ■ Replace the battery pack with another fully charged battery. ■ Initiate Hibernation or turn the computer off until external power or a fully charged battery is available.
Computer battery charge light blinks to indicate low battery condition, but computer does not beep.	Volume turned down too low.	Turn up the volume using the **Fn+F5** hotkeys.
Battery pack will not charge.	Battery pack was exposed to temperature extremes.	Allow time for the battery pack to return to room temperature.
	Battery pack is already charged.	No action required.
	Battery pack has exceeded its useful life cycle.	Use a different battery pack.
Computer shut down and memory was lost when replacing the battery pack.	Hibernation was not initiated before removing the battery pack.	Work is lost.

Continued

Solving Battery/Battery Gauge Problems *Continued*

Problem	Possible Cause	Solution
Battery charge does not last very long.	Battery is exposed to higher temperatures.	Put the computer in a cooler place and recharge the battery pack.
	Battery is exposed to extremely cold temperatures.	Put the computer in a warmer place and recharge the battery pack.
		NOTE: The recommended operating temperature range for the battery is from 10°C to 40°C (50°F to 104°F). The recommended storage temperature range for the battery is from 0°C to 30°C (32°F to 86°F).
	Battery conservation is disabled or set to drain.	Reset the battery conservation level.
	An external device is draining the battery.	Turn off or remove any external device or PC Cards when not in use.
	Battery gauge may be inaccurate and require recalibration.	Recalibrate the gauge.
Date and time must be set every time computer is turned on.	The Real Time Clock battery has reached the end of its useful life.	■ Restore power, then turn on the computer with the power switch ■ Contact your Compaq authorized service provider to replace the Real Time Clock battery.
Battery gauge seems inaccurate.	The battery pack may need calibration.	Recalibrate the battery.
	The battery pack has reached the end of its useful life.	Replace the battery pack.
Battery pack is warm after charging.	Warming occurs during charging.	No action required.

Solving CD-ROM Drive/DVD-ROM Drive Problems

Problem	Possible Cause	Solution
Drive cannot read a disc.	Disc is not properly seated in the drive.	Open the loading tray, insert the disc, then close the tray.
	Disc is loaded in the loading tray upside down.	Open the loading tray, turn over the disc (label facing up), then close the tray.
	Disc has a scratch on its surface.	Insert a different disc.
CD-ROM drive or DVD-ROM drive is not detected by the computer.	Drive is not connected properly.	If you are running a version of Windows that was preinstalled by Compaq, remove the drive from the MultiBay and reinsert it.
		If you are running a version of Windows that was not preinstalled by Compaq, turn off the computer. Then remove the drive from the MultiBay and reinsert it.

Solving Diskette Drive/SuperDisk LS-120 Drive Problems

Problem	Possible Cause	Solution
Drive cannot write to a diskette.	Diskette is not formatted.	Format the diskette: If you are using Windows 95 or Windows 98: 1. From the Windows desktop, select My Computer. 2. Select 3.5-in. Floppy (A). 3. Select File, then Format. 4. Fill in the appropriate information, then select Start. If you are using Windows NT 4.0, format the diskette by entering **format a:** at the system prompt.
	Diskette is write-protected.	Use another diskette that is not write-protected or disable the write-protect feature.
	Writing to the wrong drive.	Check the drive letter in your path statement.
	Not enough space is left on the diskette.	Save the information to another diskette.
	Drive is disabled.	Enable the proper drive through Device Manager.
	Disable diskette write ability is turned on.	Run Computer Setup. Select Device security from the Security Menu. Make sure Floppy write ability is not enabled.
System cannot start up from diskette drive or SuperDisk LS-120 drive.	A bootable diskette is not in the drive.	Verify that a diskette with the necessary system files is in the drive.
	Diskette bootability is disabled in Computer Setup.	Enable diskette bootabilty in Computer Setup, Security Menu.

Solving Hard Drive Problems

Problem	Possible Cause	Solution
Accessing information on the hard drive is much slower than usual.	Hard drive entered low power state due to timeout and is now exiting from it.	Wait for the system to restore the previously saved data to its state prior to initiating a low power state.
	Hard drive is fragmented/not optimized or has errors	Run ScanDisk and Disk Defragmenter
Hard drive does not work.	Hard drive is not seated properly.	Turn off and unplug the computer, remove the hard drive, and reinsert the hard drive.
Errors occur after starting from an additional hard drive.	Additional hard drive has not been specially prepared with necessary software.	Boot from the original hard drive or a specially prepared hard drive.
System does not recognize a hard drive.	The drive is not seated properly.	Remove, then reinsert the drive.
	The drive is damaged.	Try using the hard drive in another bay (for example, a docking base) to verify that the problem is with the drive. Run ScanDisk on the drive.
	The drive was inserted while system was on or in Suspend or Hibernation.	Shut down the computer before inserting removing a hard drive.
DriveLock settings cannot be accessed in Computer Setup.	The DriveLock settings are accessible only when you enter Computer Setup by turning on (not restarting) the computer.	Completely turn off the computer. Turn the computer back on, then run Computer Setup by pressing **F10** when the blinking cursor light appears in the upper-right corner of the screen.

Solving Infrared Problems

Problem	Possible Cause	Solution
Cannot communicate with another computer	The appropriate software is not running on both computers.	Install the appropriate software on the second device, start the second device, and start the program on both computers.
	The other computer does not have an IrDA-compliant infrared port. Your Compaq computer uses the IrDA communications protocol.	Communication between infrared devices must use the same communications protocol. Check the manu-facturer's instructions for connecting with infrared devices or try connecting with a device you know to be IrDA-compliant.
	The pathway between the infrared ports is obstructed, one port is more than 30 degrees (plus or minus 15 degrees off the center line) from the other, or the ports are more than one meter apart.	Remove the obstruction, align the infrared ports to within 30 degrees, and position computers within 1.5 feet (about 0.5 meter) of each other.
	There is an interrupt request (IRQ) conflict.	Check for IRQ conflicts in the Device Manager. If two devices have the same IRQ address, reassign one of the devices.
	There is a baud rate conflict.	Select the same baud rate for both computers.
	There is a conflict with the # bits.	Select the same # bits setting for both computers.
	There is a stop byte conflict.	Select the same stop byte for both computers.
	There is a parity conflict.	Select the same parity setting for both computers.

Continued

Solving Infrared Problems *Continued*

Problem	Possible Cause	Solution
Cannot transmit data	Direct sunlight, fluorescent light, or flashing incandescent light is close to the infrared connections.	Remove the interfering light source(s).
	There is interference from other wireless devices.	Keep remote control units such as wireless headphones and other audio devices away from the infrared connections.
	There is a physical obstruction in the way.	Do not place objects that will interfere with a line-of-sight data transmission between the two units.
	One of the units was moved during data transmission.	Do not move either unit during data transmission.
	The orientation of the units is wrong.	Adjust the devices so that the IR ports point directly at each other.
	The distance between the units is too great.	Verify that devices are not more than 1.5 feet (0.5 meter) apart.
Infrared port doesn't work.	Direct sunlight, fluorescent light, or flashing incandescent light is close to the infrared connections.	Remove the interfering light source(s).
	There is interference from other wireless devices.	Keep remote control units such as wireless headphones and other audio devices away from the infrared connections.
	IR has been disabled	Run IR configuration utility in Control Panel

Solving Keyboard/Numeric Keypad Problems

Problem	Possible Cause	Solution
Screen is blank and keyboard is working.	A screen timeout has been initiated.	Press any key to refresh the screen.
	QuickLock/QuickBlank has been initiated	To renewable the keyboard and return your information to the screen, enter your power-on password.
	LCD has been disabled	Press **Fn+F4** to cycle from external monitor to internal LCD.
Embedded numeric keypad on computer keyboard is disabled.	Num Lock function is not turned on	Press **Fn+Num Lk** to enable the Num Lock function and embedded numeric keypad.

Solving Modem Problems

Problem	Possible Causes	Solution
Modem loses connection.	The cable connection from the phone line to the modem is loose.	Check to make sure the telephone cable is properly connected.
	Call Waiting has not been disabled.	Disable Call Waiting: 1. Select Start → Settings → Control Panel → Modems. 2. From the General tab of the Modems Properties page, select Dialing Properties. 3. From the My Locations tab of the Dialing Properties page, check the box labeled This location has call waiting. Depending on your phone system, select *70, 70#, or 1170 from the drop-down list to disable call waiting.
	There is noise or excessive traffic on your phone line.	Try connecting later.

Continued

Solving Modem Problems *Continued*

Problem	Possible Cause	Solution
Modem not responding	Modem is not set up correctly in system BIOS.	Check the computer BIOS setup. If it requires specific settings for modems, be sure that they have been enabled.
Modem does not dial correctly.	Telephone number is not entered correctly in the modem's dialing software.	■ Make sure the telephone number you dialed is correct if you are using the dialing directory or the terminal mode. ■ Dial 1 if you are dialing long distance. ■ The other line could be busy or not answering. ■ Make sure call waiting is disabled. ■ The modem may not recognize an international dial tone. Try the ATX3DT command and the telephone number.
Characters are garbled/transfer rates are slow.	There is noise in the telephone line.	■ Check your telephone and modem cable connections. If they are a little loose, they can cause noise on the line. ■ Check with your local telephone company for a phone line filter.

Continued

Solving Modem Problems *Continued*

Problem	Possible Cause	Solution
No dial tone	Phone service is not connected to the telephone wall jack.	Verify that service from the local phone company by following these steps: 1. Unplug the telephone cable from the telephone wall jack. 2. Connect a telephone to the jack, pick up the handset, and listen for a dial tone. If there is a dial tone, reconnect the modem to the telephone wall jack with the telephone cable and make sure all connections are secure. 3. If there is still no dial tone, contact your local phone company or building manager.
	The modem is not responding to commands from the computer keyboard.	Verify the modem and computer are connected: 1. Select Start → Programs → Accessories → HyperTerminal, then go to Terminal Mode. 2. Type **AT** and press the **Enter** key. If the modem displays OK, the modem and computer are working together. If the modem displays ERROR, or does not respond, restart the computer and repeat step 1. 3. Type **ATDT** and listen for a dial tone. 4. Type **ATH0** to hang up.

Continued

Solving Modem Problems *Continued*

Problem	Possible Cause	Solution
Modem does not connect at highest speed.	Line conditions in your area or in the area you are calling may not support the highest connect speeds.	Have your telephone line checked by your local telephone service provider.
		Try dialing an alternate telephone number for the service you are using.
	Another device on your telephone line may be causing interference.	Hang up an extension telephone and disconnect any other devices that may be using the same telephone line, then redial.
	The service or site called does not support 56K or supports an incompatible 56K implementation.	An internal modem supports K56flex.
		To find an Internet service provider (ISP) that supports K56flex, go to the Compaq Web site at www.compaq.com.
	There is noise on the telephone line.	The 56K protocol of an internal modem will fall back to lower speeds if the telephone line is too noisy for a high-speed connection.
		Try using another telephone line.
	The telephone line does not support 56K implementation.	The 56K protocol requires that the telephone line contain no more than one analog-to-digital conversion.
		Try connecting from an alternate site.

Solving PC Card Problems

Problem	Possible Causes	Solution
Computer does not beep when a PC Card is inserted.	PC Card is not inserted properly.	Try reinserting the card. Ensure that the PC Card is inserted in the correct orientation. Insert the card gently to prevent damage to the pins.
	Speakers are turned off or volume is turned down.	Adjust the overall system volume control using the **Fn+F5** hotkeys. Make sure the mute box is not checked
	PC Card or card driver is not PCMCIA compliant.	Contact your Compaq authorized dealer, reseller, or service provider for a list of PC Cards tested successfully in Compaq PC Card platforms.
Computer beeps only once when a PC Card is inserted.	The computer beeps once to indicate that a PC Card is recognized but not properly configured.	Before a new PC Card can be used, it may be necessary to perform an initial setup procedure. Follow the PC Card manufacturer's instructions for formatting a hard drive card or installing PC Card-specific drivers for a network card.
Network PC Card does not work.	Necessary drivers are not installed (turned on).	Refer to the instructions that came with the PC Card or contact the vendor for information on installing the correct drivers.
	PC Card is not fully inserted or is upside down.	Ensure the PC Card is inserted correctly.
	Network PC Card or driver is not PCMCIA compliant.	Contact your Compaq authorized dealer, reseller, or service provider for a list of PC Cards tested successfully in Compaq PC Card platforms.

Continued

Solving PC Card Problems *Continued*

Problem	Possible Cause	Solution
Storage PC Card does not work.	SRAM and flash memory PC Cards require the memory card driver to be loaded.	Memory cards can only be accessed using DOS real mode drivers.
	You are trying to access the storage PC Card using the wrong drive letter.	If you are running Windows 95, change the drive letter assignment in Device Manager.
		If you are running Windows NT 4.0, change the drive letter assignment through the Control Panel.
	The PC Card is not formatted.	For memory cards, run MCFORMAT in MS-DOS Mode to format the PC Card. For ATA cards, run ATAINIT, then run MCFORMAT in MS-DOS Mode to format the PC Card.
	The card is not supported.	Contact your Compaq authorized dealer, reseller, or service provider for a list of PC Cards tested successfully in Compaq PC Card platforms.
	Storage cards, such as SRAM, do not work in the desktop expansion base.	Use the storage card in the computer.

Solving Power Problems

Problem	Possible Cause	Solution
Computer will not turn on.	Battery is discharged and computer is not connected to a power source.	■ Charge the battery pack. ■ Replace the battery pack. ■ Connect the computer to an external power source.
	Battery is discharged and cables to the external power source are unplugged.	Ensure that cables connecting the computer and the external power source are plugged in properly.
Computer turned off while it was left unattended.	Computer initiated Hibernation because of a critical low battery condition.	■ Charge the battery pack. ■ Replace the battery pack. ■ Connect the computer to an external power source.
	The computer initiated Hibernation after a user-defined timeout expired.	Turn on the computer.

Solving Screen Problems

Problem	Possible Cause	Solution
Characters on computer display are dim.	Computer is in direct light.	Move the computer or adjust the screen.
	The brightness control is not set properly.	Adjust the brightness control by pressing the **Fn+F10** hotkeys.
	You may have a screen saver or screen blanking utility installed.	Press any key to refresh the screen.
	Screen timeout was initiated.	Press any key to light the screen.
	System initiated Suspend after a user-defined timeout expired.	Press the suspend button to exit Suspend.
	Computer initiated a low battery Suspend or Hibernation.	■ Replace the battery pack and exit Suspend or Hibernation. ■ Connect the computer to an external power source and exit Suspend or Hibernation.
	Power Management, which controls Suspend and Hibernation, is disabled and the battery pack has discharged.	■ Replace the battery pack and turn on the computer. ■ Connect the computer to an external power source and turn on the computer.
Computer screen is blank and external monitor displays information.	Display was switched to the external monitor.	Press **Fn+F4** to display information on the computer screen; press **Fn+F4** again to display information simultaneously on both screens.
	Lid switch is stuck.	Tap the switch.
Fn+F4 hotkey combination does not switch between internal and external displays.	CRT or other display device is not connected properly.	Check your connections to ensure that an external device is connected properly.

Solving USB Problems

Problem	Possible Cause	Solution
External device connected to a USB connector does not work.	The operating system limits external devices connected by USB to two tiers which can include no more than two hubs on the first tier and no more than one keyboard and one pointing device on the first or second tier.	Reduce the number of connected external USB devices to no more than two hubs on the first tier, and no more than one keyboard and one pointing device on the first or second tier.
External device connected to USB connector does not work during startup (before Windows 95 or Windows 98 loads).	During startup, only two tiers are supported by the USB port. These tiers can include no more than two hubs on the first tier and no more than one keyboard and one pointing device on the first or second tier.	Use the external device only after Windows 95 or Windows 98 has loaded. Reduce the number of connected external USB devices to no more than two hubs on the first tier, and no more than one keyboard and one pointing device on the first or second tier.
External devices in lower tiers do not work.	An unpowered hub is connected to another unpowered hub.	Use only powered hubs. Make sure that all unpowered hubs are immediately preceded by powered hubs in the USB chain.

appendix *A*

COMPAQ CUSTOMER SUPPORT

Preparing for a Technical Support Call

If you cannot solve a problem using the troubleshooting tips in Chapter 13 and the online Troubleshooting help, you may need to call technical support. To receive the fastest possible solution when you call, follow the instructions in Chapter 11 to run the Compaq diagnostics utilities and have the following available:

■ The computer

■ Serial number on the bottom of the computer

■ Purchase date on invoice

■ Conditions under which the problem occurred

■ Error messages that occurred

■ Hardware configuration

■ Type of printer connected

■ Hardware and software you are using

■ Product identification number (PIN), which you entered when you set up the computer. (Select Start → Settings → Control Panel → System → General tab. Your PIN number is below your name.)

NOTE: If you take your computer to a Compaq authorized reseller, dealer, or service provider for service, remember to disable all passwords. If your computer is inaccessible, provide your passwords to the service provider .

Worldwide Telephone Numbers

Locate your country and type of assistance you need from the following table. Use the phone numbers for "Eastern Europe, The Middle East, and Africa" for countries in those regions that are not listed individually.

When calling to request technical assistance for your computer, please have your computer serial number available.

Information and technical assistance are also available from the Compaq Web site at www.compaq.com.

NOTE: Telephone numbers are subject to change without notice.

Worldwide Telephone Numbers

Location	Country Code	Telephone Number
Argentina		
General Information	+54	1 704 3800
Technical Support	+54	38 1 704 00
Fax	+54	1 704 3809
Australia		
General Information	+61	2 9911 1999
Customer Support	+61	1 300 368 369
Technical Support	+61	2 9911 1955
FaxPaq/PaqFax	+61	2 9911 1982
Austria		
General Information	+43	1 7956 7700
Technical Support	+43	1 7956 7700
Fax	+43	1 7956 7999

Continued

Location	Country Code	Telephone Number
Belgium		
General Information	+32	2/713 13 00
Technical Support*		0900 102 01 (6.05BEF/18s)
Fax		
QuickLine BBS	+32	2/713 14 44
	+32	2/716 95 92
Brazil		
General Information	+55	(11) 5188 4600
Canada		
General Information		1 905 707 1715
Product Information*		1 800 567 1616
Technical Support*		1 800 OKCOMPAQ (1 800 652 6672)
Customer Support*		1 800 263 5868
Order Software Backup*		1 800 952 7689
Battery Pack Recycling*		1 800 263 5868
Caribbean		
Technical Support		1 281 518 2200
Chile		
General Information	+56	2 200 8100
Technical Support	+56	2 225 9490
China		
General Information	+86	10 6831 3399
Technical Support	+86	10 6834 6721
Customer Response Center	+86	10 6834 6738
BBS	+86	10 6834 6709
FaxPaq/PaqFax	+86	10 6834 6724
Verification Center	+86	10 6834 6739
Management Service Center	+86	10 6831 3399 ext. 5873

NOTE: * Indicates domestic numbers not available internationally

Location	Country Code	Telephone Number
Colombia		
General Information	+57	1 312 0201
Technical Support	+57	1 523 1800
Czech Republic		
General Information	+420	2 61 108 111
Technical Support	+420	2 61 108 158
Denmark		
General Information	+45	45 90 45 90
Technical Support	+45	45 90 45 45
QuickLine BBS	+45	45 90 45 50
Eastern Europe, The Middle East, and Africa		
Technical Support and General Information	+353	1 402 6833
Fax	+353	1 406 855
Ecuador		
General Information	+59	3 225 4343
Finland		
General Information	+358	0203 445 00
Technical Support*		0203 206 720
France		
General Information*		0803 804 805 (0.99 FTTC/mn)
Technical Support*		0803 813 823 (0.99FTTC/mn)
Germany		
General Information*		0180/3 22 12 21 (0.18 DM/min.)
General Information Fax*		0180/3 22 12 20 (0.18 DM/min.)
Technical Support (Portables Hotline*)		0180/5 21 21 11 (0.24 DM/min.)
Technical Support Fax*		0180/5 21 21 17 (0.24 DM/min.)

NOTE: * Indicates domestic numbers not available internationally

Location	Country Code	Telephone Number
Greece		
General Information	+30	1 6141371
Fax	+30	1 6141370
Hong Kong		
General Information	+852	28681600
Technical Support	+852	90116633
FaxPaq/PaqFax	+852	28671648
Hungary		
General Information	+36	80 COMPAQ(266-727 or 206-720)
Technical Support	+36	80 COMPAQ (266-727 or 206-720)
India		
General Information	+91	80 559 6023
FaxPaq/PaqFax	+91	80 559 8989
BBS	+91	80 559 8900
Ireland		
General Information*	+972	01800 409 454
Israel		
General Information	+972	9 9593888
Fax	+972	9 9542530
Technical Support	+972	9 9593300
Italy		
General Information*	+39	02 57590330
Technical Support	+39	02 48230023
Fax	+39	02 48230002
Japan		
General Information*		0120 101 589
Technical Support*		0120 101 589
Dial Q2 Technical Support*		0990 505 589 (toll free + 100 yen/min)
Order Software Backup*		0120 250 589

NOTE: * Indicates domestic numbers not available internationally

Location	Country Code	Telephone Number
Korea		
Product Information	+82	2 3470 0700
Technical Support	+82	2 523 3575
Customer Support*		080 902 7777
Luxembourg		
General Information	+352	49 13 02 (12,5FLUX/min)
Technical Support*	+352	089 89 232
Fax	+352	49 14 40
QuickLine BBS	+32	2 716 95 92
Malaysia		
General Information	+60	3 754 1122
Customer Response Center	+60	3 754 1155
Mexico		
General Information	+52	5 229 7900
Technical Support	+52	5 262 7180
FaxPaq/PaqFax	+52	5 229 7920
Netherlands		
General Information	+31	182 565 805
Technical Support*		0900 1681616 (Dfl. 0.75/min)
Fax*		0900 8991116 (Dfl. 0.40/min)
New Zealand		
General Information	+64	9 307 3969
Technical Support	+64	9 379 4646
Customer Support Center	+64	9 379 7001
Norway		
General Information	+47	23 20 60 00
Technical Support	+47	22 07 20 20
Fax	+47	22 07 20 21
Peru		
General Information	+51	1 222 5012

NOTE: * Indicates domestic numbers not available internationally

Location	Country Code	Telephone Number
Poland		
General Information	+48	22 630 3535
Technical Support	+48	22 630 3535
Portugal		
General Information	+351	1 412 8400
Technical Support	+351	1 412 8460
Technical Support	+351	1 412 8417
Fax	+351	1 412 0654
Russia		
General Information	+7	95 967 1700
Technical Support	+7	95 967 3138
Singapore		
General Information	+65	750 3030
Customer Service	+65	750 3030
FaxPaq/PaqFax	+65	750 4514
Slovak Republic		
General Information	+421	50 22 2111
Technical Support	+421	50 22 2402
Fax	+421	5542 5660
South Africa		
General Information	+27	11 356 4444
Technical Support	+27	11 356 4444
Fax	+27	11 483 3411
Spain		
General Information	+34	902 10 14 14
Technical Support	+34	902 20 2400
Fax	+34	91 634 88 11
Sweden		
General Information	+46	200 27 00 00
Technical Support*	+46	8 730 01 50 (75 SK per call)
Fax	+46	9 730 01 62

NOTE: * Indicates domestic numbers not available internationally

Location	Country Code	Telephone Number
Switzerland		
InfoLine*		0844 844 111
Technical Support (German)	+41	01/01 801 42 22
Technical Support (French)	+41	01/01 801 42 23
Taiwan		
General Information	+886	2 735 1000
Technical Support	+886	2 376 1170
Thailand		
General Information	+66	2 679 6222
Turkey		
General Information	+90	216 310 2020
Fax	+90	216 391 8428
United Arab Emirates (Dubai)		
General Information	+97	14 818 100
United Kingdom		
General Information*		0845 270 4000
General Information	+44	141 270 4000
United States		
Product Information*		1-800-345-1518
Technical Support*		1-800-OKCOMPAQ (1-800-652-6672)
FaxPaq/PaqFax*		1-800-345-1518, Option 1
Download Facility* (modem access only)		1-281-518-1418
Order Software Backup*		1-800-952-7689
Battery Pack Recycling*		1-800-524-9859
Venezuela		
General Information	+58	2 953 0854
Technical Support	+58	2 953 9705

NOTE: * Indicates domestic numbers not available internationally

appendix *B*

REGULATORY NOTICES

Throughout these regulatory notices, Compaq products are referred to by their regulatory agency series numbers.

Regulatory Agency Series Numbers

Regulatory agencies worldwide use agency series numbers for product identification. Each approved product displays the assigned agency series number. To ensure continued safe and reliable operation, use your portable computer only with the products listed below:

Product	Agency Series Number
Battery Charger	PP1003
Primary Battery Pack	PP2041A, PP2041B or PP2041C
MultiBay Battery Pack	Series PP1001C
Docking Stations	PP1005, PP1006 & PP1007
Automobile Power Adapter/Charger	401043
Aircraft Power Adapter	386504
External Diskette Drive	PP2046
AC Adapter	PPP003, PPP003A, PPP003L, PPP003N

Telecom Network Approvals

The telecommunications device in your computer is approved for connection to the telephone network in the countries whose approval markings are indicated on the product label. Additional country approvals may be found on the Compaq Web site. To view these approvals, visit www.compaq.com and perform a site search for the words "modem telecom approvals." If a selection is available for your product, you may view and print the approval marks or numbers.

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Compaq Computer Corporation may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Declaration of Conformity for Products Marked with the FCC Logo (United States only)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For questions regarding this declaration, write

Compaq Computer Corporation
P. O. Box 692000, Mail Stop 510101
Houston TX 77269-2000

or call 281-514-3333

To identify your product, refer to the part, series, or model number found on the product.

If you have questions about your product that are *not* related to this declaration, please write

Compaq Computer Corporation
P. O. Box 692000, Mail Stop 530113
Houston TX 77269-2000

or call Compaq

Product Information Center	1-800-345-1518
Technical Support	1-800-OKCOMPAQ
	(1-800-652-6672)

Canadian Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Avis Canadien

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union Notice

Telecommunications Terminal Equipment with the CE marking comply with Telecommunication Terminal Equipment and Satellite Earth Station Equipment (TTE & SES) Directive (98/13/EC), the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the European Community.

Compliance with these directives implies conformity to the following European Norms or Regulations (in brackets are the equivalent international standards and regulations):

■ EN55022 (CISPR 22) - Electromagnetic Interference

■ EN50082-1 (IEC801-2, IEC801-3, IEC801-4) - Electromagnetic Immunity

■ EN60950 (IEC950) - Product Safety

■ CTR21 (ETSI TBR21) - Attachment requirements for connection to the analogue PSTNs of terminal equipment

The equipment has been approved in accordance with Council Decision 98/482/EC for pan-European single terminal connection to the Public Switched Telephone Network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point. In the event of problems, you should contact your equipment supplier in the first instance.

The equipment is designed to work with all EU telephone networks. However, the equipment may have interworking difficulties for some connections on the EU public networks. Dialling by loop disconnect pulses is not intended to be used on the PSTN. This feature is only supported in consideration of PBX or other equipment which requires pulse dialling. Network compatibility is dependent on software switch settings which are set automatically by the country selection. The user should contact the equipment supplier in case of difficulty in network settings.

Use the Country Select Software supplied with the product to configure your modem for the country in which you are currently located. Selecting a country other than the one in which you are currently located may cause your modem to be configured in a way that violates the telecommunication regulations/laws of that country. In addition, your modem may not function properly if the correct country selection is not made.

Japanese Notice

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

German Ergonomics Notice

Compaq computers bearing the "GS" approval mark meet the requirements of ZH 1/618 (German Safety Regulations for Display Work Places in the Office Sector) when used in conjunction with docking bases, keyboards, and monitors that bear the "GS" approval mark. The Compaq portable computers in a stand-alone mode are not intended for continuous use in an office environment.

Airline Travel Notice

Use of electronic equipment aboard commercial aircraft is at the discretion of the airline.

Energy Star® Compliance

This computer is compliant with the U.S. Environmental Protection Agency (EPA) Energy Star Computers Program 2.0. The EPA Energy Star® logo does not imply endorsement by the EPA. As an Energy Star® Partner, Compaq Computer Corporation has determined the product meets the Energy Star guidelines for energy efficiency.

Battery Notice

⚠️ **WARNING:** This computer contains a lithium ion battery pack. There is a risk of fire and chemical burn if the battery pack is handled improperly. Do not disassemble, crush, puncture, short external contacts, dispose in water or fire, or expose it to temperatures higher than 60ºC (140ºF). Replace only with the Compaq battery pack for this computer.

This computer contains an internal lithium battery-powered real-time clock circuit. There is a risk of explosion and injury if the battery is incorrectly replaced or improperly handled. Do not attempt to recharge, disassemble, immerse in water, or dispose of it in fire. Replacement should be done by a Compaq authorized service provider using the Compaq spare part for this computer.
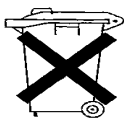
In North America, dispose of nickel metal hydride or lithium ion batteries by taking advantage of the Compaq battery recycling program. You will be provided with a postage-paid battery pack mailer preaddressed to a reclamation facility where the metals are recycled. For more information, call the telephone number listed for your location in Appendix A.

In Europe, do not dispose of batteries with general household waste. Dispose of or recycle them by using the public collection system or returning them to Compaq, your authorized Compaq partners, or their agents.

Power Cords

If you were not provided with a power cord for your computer or for an external power accessory intended for use with your computer, you should purchase a power cord that is approved for use in your country.

The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product. In addition, the diameter of the wire must be a minimum of 0.75 mm²/18AWG, and the length of the cord must be between 5 feet (1.5 m) and 6½ feet (2 m). If you have questions about the type of power cord to use, contact your Compaq authorized service provider.

A power cord should be routed so that it is not likely to be walked on or pinched by items placed upon it or against it. Particular attention should be paid to the plug, electrical outlet, and the point where the cord exits from the product.

Laser Safety

All Compaq systems equipped with laser products comply with appropriate safety standards, including IEC 825. With specific regard to the laser, the equipment complies with laser product performance standards set by government agencies for Class 1 laser products. It does not emit hazardous light; the beam is totally enclosed during all modes of customer operation and maintenance.

CDRH Regulations

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration implemented regulations for laser products on August 2, 1976. These regulations apply to laser products manufactured from August 1, 1976. Compliance is mandatory for products marketed in the United States.

⚠ **WARNING:** Use of controls or adjustments or performance of procedures other than those specified herein or in the laser product installation guide may result in hazardous radiation exposure.

CLASS 1 LASER PRODUCT

This system is classified as a Class 1 laser product. This label appears on the laser product.

Laser Information

Laser Type: Semiconductor GaAlAs

Wave Length:	780 ± 35 nm
Divergence Angle:	$53.5° \pm 1.5°$
Output Power:	Less than 0.2mW or 10,869 $W \cdot m^{-2} sr^{-1}$
Polarization:	Circular
Numerical Aperture:	0.45 ± 0.04

Only authorized technicians trained by Compaq should attempt to repair this equipment. All troubleshooting and repair procedures are detailed to allow only subassembly/module level repair. Because of the complexity of the individual boards and sub-assemblies, no one should attempt to make repairs at the component level or to make modifications to any printed wiring board. Improper repairs can create a safety hazard.

Safety Precautions for Modems

Always follow these basic safety precautions when using a modem or telephone that is not cordless.

⚠ **WARNING:** When using this device, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

- Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
- Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.
- Do not use this product to report a gas leak in the vicinity of the leak.
- Always disconnect the modem cable before opening the equipment enclosure or touching an uninsulated modem cable, jack, or internal components.
- If this product was not provided with a telephone line cord, use only No. 26 AWG or larger telecommunication line cord in order to reduce the risk of fire.

U.S. Regulations Governing the Use of Modems

This equipment complies with Part 68 of the FCC rules. Located on the bottom of the computer is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. Upon request, you must provide this information to your telephone company.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most areas (but not all), the sum of the RENs of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your telephone line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

The REN for this device is less than 1.

If your telephone equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But, if advance notice is not practical, you will be notified as soon as possible. You will also be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, contact your local telephone company for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

For the Compaq Customer Support Center and your nearest Compaq authorized reseller in North America, call 1-800-345-1518 or write:

Compaq Customer Support Center
P.O. Box 692000
Houston, Texas 77269-2000

Telephone Consumer Protection Act of 1991

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone facsimile machine unless such message clearly contains, in a margin at the top or bottom of each transmitted page, or on the first page of the transmission, the date and time it is sent and an identification of the business, or entity, or individual sending the message and the telephone number of the sending machine or such business, or entity, or individual.

Canadian Regulations Governing the Use of Modems

NOTE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing the equipment, users should ensure that it is permissible to be connected to the facilities of the local tele-communications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

⚠ **CAUTION:** Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority or an electrician.

NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices, subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

The Ringer Equivalence Number (REN) for this device is less than 1.

For the location of the authorized Canadian maintenance facility nearest you, call 1-800-263-5868 or contact:

Compaq Canada, Inc.
45 Vogell Road
Richmond Hill, Ontario L4B 3P6

New Zealand Modem Statements

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment is not capable, under all operating conditions, of correct operation at the higher speeds for which it is designed. Telecom will accept no responsibility should difficulties arise in such circumstances.

This device is equipped with pulse dialing while the Telecom standard is DTMF tone dialing. There is no guarantee that Telecom lines will always continue to support pulse dialing.

Use of pulse dialing, when this equipment is connected to the same line as other equipment, may give rise to bell tinkle or noise and may also cause a false answer condition. Should such problems occur, the user should *not* contact the Telecom Faults Service.

Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom's Specifications:

(a) There shall be no more than 10 call attempts to the same number within any 30 minute period for any single manual call initiation, and

(b) The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next attempt.

When automatic calls are made to different numbers, the equipment shall go on-hook for a period of not less than 5 seconds between the end of one attempt and the beginning of the attempt.

The equipment shall be set to ensure that calls are answered between 3 and 30 seconds of receipt of ringing (SO set between 2 and 10). This ensures:

A person calling your modem will hear a short burst of ringing before the modem answers. This confirms that the call has been successfully switched through the network.

Caller identification (which occurs between the first and second ring cadences) is not destroyed.

This equipment does not fully meet Telecom's impedance requirements. Performance limitations may occur when used in conjunction with some parts of the network. Telecom will accept no responsibility should difficulties arise in such circumstances.

This equipment should not be used under any circumstances that may constitute a nuisance to other Telecom customers.

This equipment should not be set to make automatic calls to the Telecom '111' Emergency Service.

Macrovision Corporation Notice

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

appendix C

ELECTROSTATIC DISCHARGE

A discharge of static electricity from fingers or other electrostatic conductors may damage electronic components. Before handling electrostatic-sensitive components, discharge static electricity by one of the methods described in this appendix.

Preventing Electrostatic Discharge

When Handling Drives

To prevent electrostatic damage to drives, observe these precautions:

■ Before handling a removable drive, discharge static electricity by touching the unpainted metal surface or lug nuts on the connectors on the back of the computer.

■ Avoid touching connector pins on the computer and on the drive.

When Installing Internal Components

To prevent electrostatic damage when installing internal components, observe these precautions:

■ Keep components in their electrostatic-safe containers until you are ready to install them.

■ Have everything needed for the installation within reach so that you do not have to leave the area after beginning installation.

- Use nonmagnetic tools.

- Before touching an electronic component, discharge static electricity by one of the grounding methods described in the next section. If you must leave the area during installation, remember to reground yourself before resuming installation.

- Avoid touching pins, leads, and circuitry. Handle electronic components as little as possible.

- If you remove a component, place it in an electrostatic-safe container.

Grounding Methods

There are several methods for grounding. Use one or more of the following grounding methods when installing components in the computer.

- Touch the unpainted metal surface or lug nuts on the connectors on the back of the computer. Avoid touching connector pins. If installation instructions direct you to unplug the compute, unplug it after being properly grounded and before removing the cover.

- Touch an exterior unpainted metal surface of equipment that is connected to an electrical outlet by a grounding plug.

- Use a wrist strap connected by a ground cord to the computer chassis. Wrist straps are flexible grounding straps with a minimum of 1 megohm ± 10 percent resistance in the ground cords. To provide proper ground, wear the strap snug against the skin.

NOTE: If you need more information about static electricity or assistance with product installation, contact your Compaq authorized dealer, reseller, or service provider.

appendix *D*

SPECIFICATIONS

The following guidelines provide a safe operating environment for your computer.

Computer Dimensions		
	U.S.	**Metric**
Height	1.1 in.	2.8 cm
Width	12.4 in.	31.5 cm
Depth	9.8 in.	24.9 cm

Operating Environment		
Temperature		
Operating	50 to 95°F	10 to 35°C
Nonoperating	14 to 140°F	-10 to 60°C
Relative Humidity (noncondensing)		
Operating	10 to 90%	
Nonoperating	5 to 90%—38.7°C Maximum Wet Bulb	
Maximum Altitude (unpressurized)		
Operating	0-10,000 ft	3.05 km
Nonoperating	0-30,000 ft	9.14 km

Rated Input Power	
Operating Voltage	95-264 VAC RMS
Operating Current	less than 60 Watts
Operating Frequency Range	47 to 63 Hz

NOTE: This product is designed for IT power systems in Norway with phase-to-phase voltage not exceeding 240 Vrms.

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